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THE THEORY OF  
EVOLUTION  
AND THE  
FACTS of SCIENCE

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HARRY RIMMER

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## The Theory of Evolution and the Facts of Science



By writing this book, Dr. Rimmer has put both true science and religion in his debt. He has written, so plainly that anyone can understand it, a trenchant, pointed, scientific refutation of the dogma of evolution on its chosen ground — biology, embryology, and paleontology.

Have you been told that the similarity of all living organisms points to a common ancestry? That each individual in its embryonic state passes through the same process of evolution by which its race developed?

Have you seen arrestingly life-like constructions of apemen, which their creators term "reconstruction"?

If you have—then read this book and learn the other side of the story!

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THE  
THEORY OF EVOLUTION  
AND THE  
FACTS OF SCIENCE



*The*  
Theory of Evolution  
*and the*  
Facts of Science

by  
HARRY RIMMER, D.D., Sc.D.



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THE THEORY OF EVOLUTION AND THE FACTS OF SCIENCE  
by Harry Rimmer, D.D.

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## PREFATORY NOTE

**F**OR a long time the world has heard this false ultimatum: "Which will you have—science or religion? You can have one or the other, but not both, for they are fundamentally opposed." The origin of man, the theory of evolution versus creation, has been made the focus of the struggle. In the face of that antithesis some have espoused science, and some have become rabidly opposed to all systematic inquiry into nature. Even those who somehow sensed that the antithesis was a false one, and that true science could not deny true religion, since both are grounded in one Supreme Being—even those visionaries have not been sufficiently versed in scientific knowledge to effect any sort of reconciliation.

But in the course of its development, science has been discovering that it cannot take the place of religion, and that the "facts" which were supposed to prove the Bible false have themselves given way before the verity of revelation.

To share this newer knowledge with those who still falter before the "either-or" which is still too often presented as a necessary choice, this book was written. It contains evidences in

confirmation of Bible truth, material which has been tried in many ways and been found so true that it cannot be refuted. Student bodies of the English speaking world are familiar with the facts here presented. The material has been widely used in debates, in classroom lectures and discussions. It has successfully weathered all attempts at breaking it down. It has helped many sincere, bewildered questioners to find anchorage on the verities of the Bible.

Therefore we have warranted confidence in the integrity and convincing authority of these facts. For the sake of many who have requested that they be put into permanent form, this volume is now brought forth. It is backed by the gratitude of thousands of students who have been aided by the systematized presentation of proofs of the facts of the Bible *on the very grounds of science.*

With the hope that this material may find its way into many libraries, public as well as private, this book is sent forth in defence of fact, as opposed to vain and fallacious theory. Truth is mighty, and will prevail; but sometimes the conflict is so long that many are lost in the battle. For all questioners who desire to keep their faith, and especially for students in surroundings almost atheistic, we trust that this simple summary may be ammunition in defense of the truth.

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THEORIES OF EVOLUTION  
AND THE  
THE FACTS OF BIOLOGY





## THE FACTS OF BIOLOGY AND THE THEORIES OF EVOLUTION

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**T**HE riddle of the universe is still unsolved! Of all the amazing and perplexing questions that have fascinated and baffled the mind of man, the problem of the origin of life is the most stubborn. Science has solved uncounted enigmas, but the simple fact of life has so far resisted every effort of the man of research, and its origin is as much a scientific mystery as it ever has been. Even the vaunted theory of organic evolution which has held sway and retarded true scientific investigation and progress for so long, never offered any explanation of the origin of life, but was content to speculate on the progress of that which was already here.

The universe teems with life. It rides on every atom of dust; it lives in every drop of moisture in nature; it throngs the very air we breathe. In the sap and juices of all plants and fruits, in the moisture that exudes from the bodies of man and beast alike, in the rain that falls from

the clouds above, in the ponds of fresh water, the pool of desert alkali or the pulsing expanse of the ocean's deep; everywhere that there is moisture, life is seen. In darkness and light, in the recess of the unplumbed depths of the grimmost cavern, or the ceaseless blaze of the Sahara sun—*life is omnipresent.*

It is, of course, inevitable that science should strive to solve the problem of the nature and origin of the mysterious thing called life. Science exists only for the joy of exploring unknown paths, but after these generations, yes even centuries, of research and inquiry, the beginning and source of life is as mysterious as ever. Recognizing its presence here, and starting our inquiry with an acceptance of the fact of the reality of life we learn many things about it, but its nature and beginnings are shrouded in the impenetrable veil that hides all questions of origin. Paradoxically, the facts we do possess make the mystery of origin the deeper!

We know that there is never any life without antecedent life of that particular kind. Many and exhaustive experiments have established this fact beyond the shadow of question—life comes only from vital ancestry. It may be of interest here to review a series of experiments that establish this, and we shall take time for a very brief summary of results and conclusions. Because of their rapid generation and quick

growth to maturity, the order of life called the "Infusoria," was used.

You are undoubtedly familiar with this kind of life. If straw, hay, dried leaves, lettuce, or any other kind of vegetation is put in water and allowed to stand long enough, the water will be found teeming with animalcules of various species and varieties. Their number is almost unlimited, and they are a favorite subject for the experimenter in biology. In the course of the observations we again defined the methods of reproduction of each of the various kinds of animalcules under observation, purely as a check control for generally accepted data. Some of these creatures reproduce by budding, some by direct cell division, and some by "spores" which might roughly be compared with eggs.

Absolute sterilization of the elements of the experiments was assured, so that there was no chance to lose the conclusion of the experiment by life from a source inherent in the technique. In one series the water was sterile, the test tube was sterile, and the straw used was also sterile. The tube was made so by boiling for two hours, after having been given an acid bath fatal to any possible life continuity. The water was sterilized by boiling two hours, and the hay used was first boiled and then baked in an electric oven. The tubes in this case were loaded mechanically in an electric oven, and thus they were kept in sterile atmosphere until sealed

with a boiling seal that was also sterile. From this series of tubes we got not one single atom or speck of life of any kind or form whatever. So the conclusion is inevitable—where there is sterility of material, there is no life.

Every other experiment resulted in the production of life in teeming masses. In one series the tubes were sterile, the hay sterile, the air sterile, but the water was in a natural and unsterilized state. These tubes swarmed with life at the time of their opening, *so there was life in the water*. Another series had sterile water, sterile tubes, sterile air, but the straw used was in a natural state. The tubes when opened were heavily populated with infusoria *so there was life on the straw*. The next series had the straw, water and tubes sterile, but they were loaded in an ordinary atmosphere, and these in turn yielded myriads of living creatures, thus evidencing that there was *life in the air* as well. Take a few flakes of dust and “incubate” them and life will teem as a result. A speck of mud, a bit of decayed vegetation, a wisp of hay, a drop of moisture, or a breath of air, the seeds or spores of living matter are in or on them all. *But without these vital seeds from previous ancestors the production of life is an absolute impossibility!* There is no life without vital antecedents. This is perhaps a waste of your time, so well is the law established, but it brings us face to face with the hopelessness of a scien-



tific answer to the enigma of vital origins: *for if life only comes from life, from whence did the first life come?* We certainly know nothing of its nature and origin that has been or can be established by what we may call true scientific demonstration.

Assuredly, the eager questing mind of man must continue to strive for the answer to this as to all other perplexing problems. And when the interest of the average man was aroused to the problem of the origination of life, it was but natural that he turn to physical science and say, "Where and when and how did this thing called life begin?" To this query science can only reply, "We do not know!"

In science we do not deal with origins. A science is a correlated body of absolute knowledge. When knowledge of a certain subject has been gained by observation, proved by demonstration, and refined by experience, we gather the known and proved facts of that subject and correlate them under the title of that subject and call this body of specialized knowledge the science of that subject. So then, science is knowledge gained and verified. How gained? By trained observation. This is, in truth, the only acceptable source of scientific knowledge, as observation by untrained persons is not reliable, and therefore unacceptable. The observations of the untrained more frequently lead to superstition and error than to scientific knowledge.

As an instance, let us remember the traditional fable so common to rural districts, that a horse-hair left in water will eventually turn into a snake. How many times I tried that in my youth, and how many ancients there are still today who will arise and aver the truth of this belief: have they not seen these hair-like worms in the water many times? This firmly believed tradition comes from untrained observation.

I recently heard of a humorous illustration of this very point. A small boy said to his father, "Now I know where horses come from. Mr. Schultz, the blacksmith down the street, makes them." "Oh, no," his dad replied, "horses are born, not made. Just like cows, or chickens, or people." "No sir!" the lad insisted, "the blacksmith makes them. I saw him make one." The father was puzzled at the boy's insistence, and asked, "Now just what did you see? Did you see the blacksmith make a whole horse?" To which he received the amazing rejoinder, "No, I didn't see him make a whole one: but I saw him finish one up. *He was just nailing the feet on when I passed by!*" A perfect case of untrained observation.

I have talked with many adults who were as scientifically wrong as that! Some weird idea of what constituted science and scientific proof had wormed its way into an untrained and unprepared mind, and the wildest fallacies were believed to be sane and sober scientific fact.

Some of the most warped and fantastic theories the mind can conceive are continually coming to light under the guise of science.

Regardless of what theory of origin we may accept, there is a common ground on which we must agree; before there was a man on the earth, the earth was here, prepared to receive him. Also, regardless of the method of creation, man is the last species to appear. So if scientific knowledge comes only through trained observation, how could there be knowledge of creation, or origin, which antedated the presence of man, the observer? So we say that science does not deal with origins. When things originated, who was there to observe, and where was this hypothetical observer trained? And by whom? What experiments verified his observations? No matter how much our theories of origin may disagree, we certainly can agree that there was no trained human observer of the process.

The question of origin is therefore either in the field of philosophy or of revelation. Philosophy, not being dependent upon either proof or fact, but being entirely speculative or theoretical, may be expected to speak upon any subject. Since the nebulous vaporings of philosophy are incapable of proof or demonstration, the scientific accuracy of a statement or theory matters nothing in the pronouncements of philosophical ideas.

On the other hand, if an intelligent and reasoning Creator is in truth responsible for the marvelous mathematical structure of the physical universe, it is only logical to suppose that He would be pleased to supply a record or an explanation of the process to whatever reasoning creatures He had been pleased to create. This revelation of events that preceded the advent of man could owe nothing to human contribution and could not be said to be dependent upon human research or scientific study.

So when science replied that origins were not in her sphere, the questing mind of man turned to philosophy to seek what help philosophy could give. With the eager readiness to attack all problems on the purely mental plane that characterized the philosopher, the reply was quickly forthcoming.

### EVOLUTION!

This is the reply of philosophy to man's query, "Where, and how, did life originate?" It is not a scientific theory, it is primarily philosophical. However, when philosophy had framed the theory, science was invited to prove its truth. With great eagerness science responded and has for generations been combing the heavens and the earth for a truly scientific demonstration of this theory. But alas, for philosophy, the attempt has failed. The recent years in scientific research have not only failed

to demonstrate the fact of organic evolution, but have actually produced new facts of science that render the theory literally untenable.

This word evolution is one of the most abused and mis-used words in the English language. It has a specific and restricted meaning that is more often violated than observed. The casual speaker often talks of the "evolution" of the telephone, the "evolution" of the electric light, the automobile, and scores of other products that are products of man's industry and intelligence. The proper word here is development. All of these mechanical improvements came about because of direct supervision and control. They are changes made in inanimate objects by design, and are not to be confused with "evolution."

Organic evolution in its simplest definition can be best expressed by the word transmutation. The theory admits of no active intelligence in control, and design is foreign to the entire process. As a fantastic illustration of the literal meaning of the word evolution, let us suppose this utterly impossible case, in the "evolution" of the automobile. The first tiny two-cylinder gas buggy that came from the workshop of man was not used, but left to itself in a vacant lot of great size. There, "unaided by any external force" and helped along only by "powers resident in itself" this little two-



cylinder car gradually passed through a most amazing series of changes.

First it developed into a four-cylinder improvement over the original ancestor, and then became a credible vehicle, like the Ford car of about 1912. From this it gradually developed into a six-cylinder car, and after many changes the complex, highly organized and perfectly functioning twelve-cylinder car of the modern age emerged. Would this be evolution? No, not yet. But—if this process of gradual change continued, without outside aid or supervision, until the highest type of automobile developed wings and flew off as an airplane, *that would be Evolution!*

Preposterous, you say? Certainly it is, but not one iota more improbable than that an amoeba became a worm, the worm became a fish, the fish in turn became an amphibian, which then gradually became a reptile, which later gave rise to a bird, the bird became a mammal, and the mammal became a man!

So for the purpose of definition, let us say that “organic evolution supposes the gradual change, by resident forces, unaided by any external power, of a low form of life into higher and subsequent forms, until man appears, as the logical result of this upward tendency in nature.” Or, in one word; transmutation.

*There is a science of life.* That science is called biology, and consists of the known,

proved, verified and demonstrated facts concerning life. The classification of all living things into family groups, orders, genera and species is the work of biology. Botany, zoology, ornithology and all other sciences dealing with life and living creatures are included in the general classification of biology. It is a most comprehensive science embracing all known facts regarding all known forms of life.

Certainly, if the theory of organic evolution is to find a proof in any branch of science, it must find that proof in the biological sciences. It is rather startling to learn that the farther we go into biology, and the deeper we delve into its mysteries the less probable the theory of organic evolution becomes! Until finally the well-informed research biologist repudiates the theory as scientifically untenable.

Now comes the query "On what grounds of real evidence do you state that? Can the evidence be so stated that a layman, without scientific training and vocabulary, can master the proof?"

The purpose of this study will be to answer that query.

The theory of evolution may be clearly and concisely stated in scientific terms as the transmutation of species. Mutation, is development; transmutation, is evolution. Red roses, white roses, pink roses, yellow roses, or any other variety of rose that may exist, all are variants,

or mutants, in the mutation of the rose. But when the rose has progressed so far in mutation that it produces some new creature *that is not a rose*, then transmutation is accomplished.

All the varieties of the chicken kind have come from a common ancestral pair. The great number of different chickens the farmer is so familiar with are all mutants, or variants, of these same creatures. Mutation has progressed in the chicken to a striking extent, but as long as they all remain chickens, we are not yet in the presence of evolution. When one of these variants gives rise to some *higher* form of life that is distinctly *not* a chicken, then we have transmutation.

It is the theory of the evolutionist that all the present forms of life the earth knows, as well as all the extinct species that have been here in the past ages, came from a single primitive cell. The amoeba has been suggested as a possible starting point for transmutation, and all evolutionists agree that some protoplasm in unicellular form was earth's earliest creature. From this simple single cell came gradually all that we have recorded in the twin sciences of biology and paleontology. One low form of life produced a subsequent and higher form by transmutation, until the marvelous gamut of varieties and species and genera has been run, and the present forms of life, with which we are so

familiar, arrived by evolution, we are told by the proponents of that theory.

It is of course a pure speculation to say that the amoeba, or any other one-celled creature is older than the horse, or bird, or man. These animalcules are pure protoplasm, and this substance leaves no fossil relics in the ancient stones. As well look for the fossils of currant jelly, as to search for "fossil" amoeba. We cannot prove conclusively that such things ever existed, before the invention of the microscope made them visible to human vision.

Most certainly we accept as probable fact the theory that they did so exist from remote antiquity; but there is no *evidence* that their origin antedates the creation of man. *We presume* they were part of the creation of the Fifth Day of Genesis, when God said, "Let the waters swarm with swarms of 'rapidly multiplying' creatures". But presumption and postulation are not scientific proof! Even the deposits of diatomaceous earth are not proof of the theory that protozoa appeared ages before man, as these deposits may have been laid down in so recent a time as the last thousand years.

How startling it is to the unprejudiced thinker to realize that, although the great creatures of the past ages are remembered only by their fossil bones, and countless hundreds of species and genera have perished from the face of the earth in the course of "evolution," *the one-*

*celled ancestors still remain!* And that though these amoeba and monera and rhizopods throng the earth in uncountable profusion, none of them are in course of evolution *today*. Here we have the weird spectacle of the great metazoa perishing off the face of the earth, while their single-celled ancestors persist in teeming masses. This is an anomaly, indeed, that evolution cannot explain.

When these present day protozoa, which are living creatures whose entire organisms consist of just one cell, are observed for thousands and thousands of generations, they never change one iota from what they were in the very beginning. Countless generations pass under the eye of the observer and no new species of protozoa arise, nor do metazoa result from changes in protozoan structure. Verily, the cell is a mysterious continent awaiting exploration and conquest.

There can be no question but what the cell is the basis, or unit, of life. When the mystery of life has been finally solved, the solution of the baffling enigma will come from new knowledge of the cell and its marvelous structure.

All sentient life is composed of cells. From Paramoecium, with its one single cell as its entire organic structure, to man, with twenty-six trillion cells (using the American system of numbers) colonized to form his amazingly com-



plex organism, life is made up of groups of cells.

For a long time morphology, the science of gross bodily structure, proved the stumbling block of biologists. Realizing that all living things were simply masses of cells, and *supposing that all cells were fundamentally the same*, the biologists of a past generation concocted the theory of the Continuity of Life. This theory was that the simple protozoan forms of life passed on the same kind of life to simple metazoan forms, which in turn passed it on to simple fish forms, which in turn passed it on to simple reptiles, that the reptiles passed it on to birds, the birds passed it on to mammals, which latter animals passed the same life on to man, the climax and apex of transmutation. The continuity theory stated that all life was the same life, as it was resident in the cells, which were believed to be identical in all species.

There is a fatal flaw, however, in the basis on which the continuity theory was supposed to rest. *All cells are not the same*. There is one kind of cells of birds, another kind of cells of fishes, another kind of cells in animals, and a totally different kind of cells in man!

The cell is a marvelous structure. During recent months the cell has been the field of many interesting and exciting explorations, and some

new discoveries made therein are dramatic in the extreme. It is in this sphere of cell-differentiation that the theory of evolution has suffered its saddest collapse. No matter what relationship morphology may seem to suggest, histology clearly testifies in clarion tones to the diversity of life-substance in the various species.

It is ridiculous to refer to "similarity" as a scientific evidence of relationship. Where else in scientific circles do you find the investigator relying upon outside appearances to decide his problem? Whatever else the scientist's technique may be, it is never a process of surface indications. That "similarity of morphological structures implies relationship," is the slogan of the untutored layman, not of the scientifically trained investigator. Therefore, the question must be decided upon the evidence of histology, which is the science of the minute, the examination of the microscopic.

There is plenty of reason to say, on the grounds of morphology, if we were limited to the microscopic, that different species are composed of different life substances. All cells are *not* the same. That there is a real and demonstrable difference between the cells of a pig and a cow any diner can testify. Some people thrive on beef, but pork makes them sick. In the light of the fact that all cows and all pigs are simply cell-colonies, what constitutes the difference between meats if all cell structure is fundamental-

ly the same, and life has been passed on in continuity from species to species? What is the difference between chicken and duck, quail and pheasant, rabbit and venison, or fish and T-bone steak, if all cells are the same?

Let us reason this through, and see that even gross bodily form shows a tremendous difference between varying cell structures in the manifold divisions of biology. For instance, *Paramecium* is a slipper-shaped animalcule, having certain easily recognized food vacuoles, and moving by the activity of numerous cilia that fringe its unicellular body. But the *Euglena* is different in shape, the vacuoles are totally different, and it propels itself with one long cilium that protrudes from the "head" end. Others, such as the amoeba, have no cilia or means of locomotion, but progress by the method of accumulation of ectoplasm. They thrust out a portion of their bodily substance in what may be called pseudopods and when they have accumulated a sufficient portion of themselves in a given place, the rest of themselves simply flows into these pseudopods, and they have changed their location in space. This accounts for the constantly changing shape of such protozoa as amoebae.

Their habits of taking food vary as much as their methods of locomotion. Some have primitive "mouths" that open and close, and some simply surround and enclose their prey. Having

no skin to hinder, they can literally incorporate the food object into their body by surrounding it on all sides and closing their substance again, entirely absorbing the foreign matter, or food particle.

Protozoan methods of reproduction vary as much as methods of locomotion and feeding. Some are "immortal" and never die, breaking their body substance up into many new individuals, with the original organism still living in all the particles, which quickly become adults of their kind, to live their brief cycle of hours and repeat the process of division. Others literally and actually die, after giving birth to progeny through spores. Some forms of microscopic life actually conjugate to rejuvenate their reproductive powers. Their methods of reproduction are complicated, even though the creatures themselves are simple.

There is an amazing host of these different microscopic creatures, and they may be distinguished by the protozoologist with the ease that the average observer can tell a horse from a cow. Even though they are all composed of just one cell, they differ in size, in shape, in methods of locomotion, in food habits and in methods of reproduction. One thing they all have in common, however. No matter how they may differ one from the other, *each separate kind produces always and only after its own kind.*

The conclusion then may well be stated in positive terms; there is a real difference in cell-structure. All cells are not the same, life differs from life, and kind from kind, in myriad forms.

It is not a scientific demonstration, however, until we have examined the very substance of the cell itself. It is in this analysis of the life basis that the question of similarity and relationship must be settled. What is the real difference between one kind of cell and another kind?

The cell has been the field of painstaking inquiry, like the atom. We used to hear our teachers say that all matter was made up of atoms, tiny bases of substances so small they would never be isolated or observed by human endeavor. But Millikan and his cohorts got on the atom's trail, and now we see it as a *comparatively* enormous mass! It is divided up into infinitely smaller particles, and the eager pursuit continues the endeavor to divide these electrons up into their basic substance!

So with the cell. Eager searching has divided the cell up into its various component parts. We must not conceive of the cell as being a small mass of homogeneous substance. It is, in fact, a heterogeneous organism. There are five major divisions in cell-structure, and in each of these major divisions the cells of one species differ from the cells of every other species.

Let us consider that phase of cell structure that has been named "*Chromosome.*" In the cells of the various species there is a varying number of these chromosomes, ranging from two in some simple forms of life, up to scores in the higher forms. It may be readily seen by the trained observer, that if the cells of a certain animal contain six chromosomes, and the cells of a human being contain forty-eight, it is simple to determine on this basis the kind of cell under observation.

The difference in the number of chromosomes is not the only difference, nor is it the greatest or most significant. These tiny thread-like particles called chromosomes contain the media of inheritance. In the mechanics of reproduction, they play an important part. They contain a chemic material called "chromatin," and this fluid conceals, in turn, all the inheritance-tendencies of the past ages of the group to which the individual belongs.

There are two kinds of cells in the body, the somatic, or body cells, and the reproductive cells. The somatic cells may acquire new characteristics, but they have no power to affect the reproductive cells with these new traits. From the very first pair of each kind of living creatures, the tendencies and traits that may be inherited have been passed on in an unbroken line of descent, and no acquired characteristic may



be inherited. The mechanics of mitosis assure this.

This process of mitosis is the most fascinating phenomenon of modern biological research. There is no field of laboratory study that can compare with this in gripping interest, as the very core of the question of vital reproduction is locked up in this phase of exploration. The understanding of the basic law of Mendelism hinges upon this mitotic proceeding, and, since this article is for the layman and not for the technician, I shall endeavor to make clear in simple language the function and beauty of mitosis.

Among those creatures which begin their individual life history through this method we see that the somatic, or body cell count of chromosomes is always halved in the reproductive cells. The beginning of this process is the union of two reproductive cells through copulation, the male cell, called the spermatozoon, and the female cell, called the ovum. If the body-cells contain twenty chromosomes for instance, then the ova and the spermatozoa will each contain only ten. If the somatic count is ten then the reproductive cells will each have five, and so on through the species. When the ovum and the spermatozoon unite in copulation, they form a union that results in the correct, or somatic number of chromosomes, by the process of simple addition. The purpose in thus halving the

count of the parent body-cells is simply that the young of each species may keep this typical number of chromosomes inviolate through the ages. If this law were not in operation down through the ages then Adam and Eve would have had 48 chromosomes in their somatic count, their children would have had 96, their grandchildren 192, the next generation 384, and in each succeeding generation it would have thus been doubled, until now, in the human family, each cell would have to be of an immense macroscopic size to contain the chromosomes alone. The law upon which this process of reduction functions is not yet fully comprehended, but the process is clearly observed.

When the act of conjunction is completed, the spermatozoon approaches the ovum with the object of penetration. We must remember that the spermatozoon is extremely microscopic, and should be classified as a flagellate organism. The greater part of its entire length is a flagellus, or "tail," which is simply the motor apparatus. The apical head of the organism is the real cell. The ceaseless activity of the whipping motion of the flagellus drives the spermatozoon through the protecting endoderm of the ovum, and when penetration is completed the process called mitosis truly begins.

The chromosomes of the ovum contain in their structure all the inheritance that has come down thru the female ancestry, while the male chro-

mosomes contain all the inheritance of the male line. The chromosomes of the spermatozoon, released by the absorption of the content of the male cell by the female cell, penetrate to the relative center of the ovum, where they form a conjunction with the female chromosomes. The purpose of this juncture is to mingle the chromatin of the male and female carriers, so that the tendencies of inheritance may be mingled. In the course of this process the chromosomes form what is called the "mitotic pattern." This pattern may be, in some cases, in the form of the letter "X." Where the chromosomes cross there is an opening of their skeletal structure, and the chemic contents of the two become thoroughly mixed. Then the two chromosomes break apart at the point of juncture, and resume their normal shape and appearance, *with one vital difference*. The chromosomes now contain neither male or female chromatin, but a combination of both. So that when the polar bodies form, and the cells of the embryo form from this fertilized ovum, in the cells of the new fetus, there are all the characteristics of the ancestry of both the mother and the father.

All species do not have a mitotic pattern so simple as this, of course, and a volume would have to be written to set forth the knowledge of this process we now possess; this case is given simply by way of illustration. At least, however, we know of the physical basis upon which the

fundamental law of procreation works; that law being "each kind shall produce after its own kind."

The amazing thing is that there is an apprehendable difference in the chromosomes of the various species. Not only in their somatic count, but in the pattern they form while in the process of mitosis. The skeletal structures of these particles differ in the various species, and give a clearly-defined barrier between species that is absolutely *fatal* to the theory of evolution. The chromatin also differs, according to the species under observation.

Another field of cell research is in the substance called "*Protoplasm*." This matter is the very basis of cell structure. Also it is one of the most mysterious substances known in nature. It is the only autocontractile substance so far known; therefore it is the source of all living motion. Muscles move because of the inherent power of protoplasm to expand and contract. The living creatures from amoeba to elephant all owe the power of locomotion to this strange ability of protoplasm to manifest what may best be called elasticity.

It is also the essential element in the continuance of life. To remain alive, every individual, in every order of life, must have constantly-replenished supplies of protoplasm. Thus we arrive at the simplest law of zoological classification, and learn the test for the difference

between a plant and an animal. The animals need protoplasm, but they have no power to manufacture it. So they procure their fresh supplies by eating other creatures, either animal or vegetable, and by the process of digestion absorb their protoplasm. The plant has the power to make protoplasm out of the elements. Some in the water, and some in the air, and some by a combination of both, organize the elements they imbibe and produce protoplasm as required. So a plant may be definitely fixed in the vegetable kingdom by this power, and an animal defined by the lack of it.

But whether plant or animal, every living cell is found to contain this essential division, or component. One of the earlier theories of biology, now discarded, was that life was literally resident in protoplasm, if protoplasm was not life itself. This unfailing presence of protoplasm as the basis of all cell life, gave rise to another biological fallacy also—the continuity theory. Briefly stated, the theory of continuity sought to establish a connection between all living things by the presence of protoplasm. This theory was once a mighty handmaiden of the theory of evolution, but is entirely repudiated today.

The continuity expert showed that the amoeba had protoplasm. The rhizopod possessed it, and the euglena, the uvella, the paramoecium, and the rotifer. Each higher organism was found

to contain protoplasm, all the way up to man. Thus, said the theorist, the presence of this common substance argues a common ancestor.

This is all changed now. The archaic days of biology are over, and the super-microscope, the micro-manipulator, and ultra-violet observation have opened up new fields. The earliest experiments I know of in the differentiation of protoplasm were to determine the rate of decomposition of this element under the ultra-violet ray. Then sufficient quantities of the substance were isolated for more careful study, and we know that there is a difference in protoplasm, *by species*. If we may paraphrase a notable statement made some time ago, we can say:

“All protoplasm is not the same protoplasm, but there is one kind of protoplasm of man, another kind of beasts, another of fishes, and another of birds.” Written almost two thousand years ago by *Inspiration*, it is attested as truth today by *observation*. The protoplasm of the cat family is one kind of protoplasm, and the dog family has a distinct type of protoplasm, that differs from that of the cat. Boiled down to its essential summary, there is a variable formula for the formation of protoplasm by species. So we are now in that stage of research where we can begin to test protoplasm as we do blood! We do not make the error of saying, that as all mammals have blood they are essentially the same in origin, because we rec-



ognize the appreciable difference in the blood of one species, genus or family, as each kind of blood differs from every other kind. So today with protoplasm; and the continuity theory suffers catastrophic collapse.

While it is not possible, in the scope of such a brief study as this, to complete the case of the collapse of the theory of organic evolution in the science of biology, we must make mention of the remarkable evidence from cytology. There is a science of one small section of the comparatively enormous cell, which division is called the cytoplasm. Small indeed though the microscopic cell may be, when we study its amazingly complex structure, we find ourselves exploring a territory known as the cytoplasm. As important to life as the nucleus, or the protoplasm, or the chromosome, or the centrosome, is this division of cell-structure. There are men whose research is devoted to this one section of the cell alone, and they spend their lives in the study of this apparently restricted field. The restriction is only apparent, however, as there is much more territory still to be conquered in cytology, even after these many years. This, in spite of the amazing and illuminating discoveries that have already been made.

Let us consider, as an instance, the strange and bewildering organism, or organization, known as the Apparatus Golgi. The "appara-

tus" may be an organization, either reflex or vital; no man can yet say. In the restricted and minute portion of the cell now under consideration, we find a tiny mass of ceaseless fluctuation, having no better name for it, we call it after its discoverer, and there we must, for awhile, rest content. But while nothing is as yet known about its structure, much has been learned about its conduct. One individual is found in each of the myriads of cells that form the complete morphological structure we name the body. Within the border of the cytoplasm this speck is in ceaseless and constant fluctuation, and this motion never ceases while life is in the cell. What the purpose of this motion may be, and whether we are here facing the final mystery of the "reason" of biological vitality, are at present subjects for speculation and research; but the fact of fluctuation is established.

The wonder of the whole process is the bewildering patterns of fluctuation the "Apparatus Golgi" seems capable of attaining. In one species it completes its cycle of motion in the pattern of an old-fashioned hour glass, in another in the form of a right hand figure eight, in yet another the form of the motion is a diamond, a parallelogram, or some geometric design is reproduced, seen elsewhere in nature only in the vast field of the rhizopod. There are apparently as many plans of completing the

cycle of motion as there are variegated species!

This plan is somatic to the species the Apparatus inhabits. Recent observation has shown that when there is a threatened carcinoma, the Apparatus Golgi is subject to a change or derangement of pattern in that one organ where the cancer is forming; so in a short while a technique of observation may be developed that will warn in time of the approach of this dreaded foe of man. Indeed, if the present knowledge of the Golgi apparatus is applied, that warning may even now be observed.

By the use of a modified osmic acid technique, the Golgi bodies may be separated from the cytoplasm and in isolation studied and dissected. This opens up the hope that we may soon possess greater knowledge of this mysterious structure which is resident within our cells. But even while we wait for that greater knowledge, we have Golgi wisdom enough to assure us of the vast difference between the cells of one species and those of another, and its findings, fatal to the theories of organic evolution, are unanswerable.

Even more complete is the demolition of old ideas made manifest by the research of Mayagawa. Never again can the well-informed student say there is identity of structure in all cells; there is a vital difference even in the cells of the different organs in the same individual! Not only do cells differ by species, but

certain elements are in certain cells, for certain organs, *and those cells will not function in or for any other organ.*

Like all other living things, cells die. In the human body the longest life of a cell is twenty-eight days; the shortest, seven. When we consider that the human body is made up of approximately twenty-six trillion cells, and all these must be replaced at least once in every four weeks, we can see that there is a tremendous rate of cell replacement going on constantly. This continuous change also raises the problem of the disposal of this vast number of cell "corpses." What becomes of the dead cells?

The work of the gifted Japanese scientist above mentioned showed that when the dead cells entered the blood stream, they made the complete circuit of the system, *and returned to the organ which produced them.* Here they were broken up into their component elements, and used as the basis in the creation of new cells for that organ. When the dead liver-cells enter the blood stream, they invariably make a "round trip" and enter the liver again. The kidney will not have anything to do with them, nor will the lungs, the heart, the stomach, or any other organ in the body. They belong to the liver exclusively, and every other organ recognizes the trade mark of the liver, (or it may be the parentage), and pursues a "hands off"

policy that is rigidly respected. Even when the cells of the liver are, by force, injected into some other organ, that organ expels them into the blood stream again, and they return to the parent organ as quickly as possible. There is a distinction which is never violated. The same is true of every other organ in the body. We use the liver only by way of example. The liver will not take the cells of any other organ, any more than any other organ will take the cells of the liver. The epithelial cells are never accepted by the heart, the heart cells are never accepted by the lungs, the cells of the blood are used by no other organ, not even in the same body.

There is a splendid field for the therapeutic researcher here, as it is known that ■ sub-normal organ may be speedily brought back to normal by an injection of the dead cells of that organ. Care must be exercised in this procedure, as too heavy a load will result in production of necrotic tissue, and the latter end is then worse than the former.

The farmer is familiar with this newly discovered principle, as he is used to the process of putting back into the soil the elements his crop has taken out of that soil. So, in like manner, all the elements of ■ dead cell may be said to "fertilize" the organ that produced it, and none of the ingredients of that cell are ever used by any other organ than the producing

organ. With one outstanding exception: the red cells of the blood, when they are broken up to make new cells in the process of regeneration, contribute their hematin for the formation of bile pigment, and so the vital blood cells lose an infinitesimal portion of their substance every time they die and are born again. Since "the life of the flesh is in the blood thereof," and since it is the blood-cell alone that loses in the process of recreation, the mystery of senility and inevitable death may well lie in this factor.

The main entrancing factor about our present biological knowledge, is our woeful ignorance; but we are at least on the borderland of true understanding, and such research as this opens up new vistas for study. But we cannot enter a new day encumbered with ancient ignorance and burdened down with the fallacies of past generations. If we live in a scientific age, let us conduct ourselves with scientific intelligence, and cast aside the old falsehoods as fast as they are proved to be such.

This is an extremely difficult thing to do, and instead of grasping a new fact as opportunity for a fresh beginning in additional research, many men of the old school will seek to repudiate new truth for the sake of clinging fast to old theories. To this extent the theory of organic evolution is a sad handicap to true scientific research, as there is a regrettable tendency on the part of many men of that school to mini-



mize and hush up new discovery of scientific fact, because of its repudiation of their pet philosophy. Science and philosophy must sue for divorce before the court of true research, in order that the search for truth, called science, may no longer be forced to drag around the old hag of erroneous theory. *There are scientific "obscurantists,"* as well as religious ones!

Even recognizing the fact of our present ignorance, and perhaps being unable to see very far as we gaze into the brightness of the blazing horizon of the new day, we can at least accept those things that have been proved—chief of which is that the science of biology has demonstrated the error of relationship through common ancestry of all living things. By the multiplied evidences that prove the unbridgeable gap between various kinds of cells, establishing the foundational reason for the phenomenon of the fixity of species, we can say we are in a new day of biology. The problem now is to bring the scientific world to an apprehension of this new day, that we may have a new interpretation of biology in harmony with what we now know to be true. Certainly, even if the new interpretation is delayed in its coming, we can press on past the old and erroneous conclusion of the school of evolution, and *hold fast to the only other present alternative, the old, but newly established fact of special creation.* Only this explanation of the marvelous

fact of cell-specialization really fits all the evidences, without distorting those evidences out of their true form. For every fact and proof that militates against the truth of the theory of organic evolution is a tremendous argument in favor of the fact of special creation. So that once more we can exclaim: "Let us hold fast that which has been committed to our care, repudiating the profane babblings of a science that is falsely so called."

EMBRYOLOGY AND THE  
RECAPITULATION THEORY



## II

### EMBRYOLOGY AND THE RECAPITULATION THEORY

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**T**HE battle cry of the hordes of defenders of the theory of organic evolution long has been: "Ontogeny Recapitulates Phylogeny!" It has been the shibboleth of this school of philosophy for so long that the general public recognizes the adherent of the cult by the glib references to the science of embryology that fall so aptly from the lips of those who conform to the dogma of evolution. It is a difficult matter for the average layman to answer the arguments of the evolutionist when he retreats behind the rampart of embryology, as the subject is so technical the experts have great difficulty in making their meaning plain to the average listener. The technique of embryological research is so complicated, the material is so hard to obtain, and the equipment for research in this field so expensive, that the ordinary man of affairs is logically excluded. Therefore it is only reasonable that the layman should accept in perfect faith all that the "expert" has had to say on this subject.

It is a sad truth that the "expert" has not always dealt fairly with his credulous followers, as we shall clearly demonstrate in the body of this paper. Many times the ardent disciple of evolution has been far more anxious to establish his theory, even at the expense of fidelity to the truth, than he has been to disseminate scientific knowledge. Facts have been twisted out of their logical setting, dogmatic theories have been stated as proved facts, and the most impossible assumptions have been advanced as proof, time and time again. Even more serious than this, facts of biology have literally been suppressed, and students deliberately taught antiquated and disproved fancies in place of true data, simply because the prejudiced instructor was not willing to have his classes know that "*Ontogeny does not Recapitulate Phylogeny!*" This phrase has now lost its power to stupefy the student of biology into acquiescence with the dogma of organic evolution. Let us examine this slogan that has done such yeoman service in the past, and see what it really means. It is evidence of the truth of evolution?

Ontogeny, according to the Century Dictionary, is the entire development, or metamorphosis, or life history, of a given organism. Ontogeny, then, is a science consisting of the proved and demonstrated facts concerning methods of organic formation and functions of any given individual during the process of that



individual's embryological development. From the time the ovum is fertilized until the new life is completely formed, and the young emerges all the history is included in ontogeny. *With facts we have no dispute; we accept every fact of every science known to man.*

Our argument is with the interpretation of those facts, and it does not follow that because we accept the facts in any given field of research we are constrained to accept all the theories based on those facts. We recognize a certain morphological resemblance between individuals of various unrelated species; with that fact we have no controversy. But the statement that those resemblances denote relationship through a common ancestry is an interpretation of the fact of resemblance we are at liberty to accept or reject. Possessing a more logical explanation of this fact of resemblance; namely, the evidence of design in an orderly and intelligent creation that uses a modified plan in varying forms of creation, we are not obligated to the evolutionary interpretation of this or any other fact. So with *the facts of ontogeny*: we accept them all.

But while we definitely recognize ontogeny as a science, the reverse is true of phylogeny, if the Century Dictionary is consulted. We read there that "phylogeny" is that branch of biology that attempts to deduce the ancestral history of an animal or plant from its ontogeny,

or individual developmental metamorphosis. We must insist that "*an attempt to deduce*" is not a science! The word "recapitulate" means "to enact or live over again," and the battle slogan of the entrenched organic evolutionists clearly expressed is the claim that "the development of the human embryo re-enacts the entire evolutionary history of the human family." Before making a scientific inquiry into the truth of this theory, or slogan, let us clearly and fairly set forth the claims of the evolutionists to a proof or demonstration of their theory in the science of embryology, by way of so-called recapitulation. Does the attempted demonstration stand, in the light of undisputed facts?

The basis of the theory of recapitulation is the manner in which the embryo develops from the single cell, known as the reproductive cell, to the marvelous structure of the amazingly complex individual. When this new creature finally issues after the process of nature it is a Metazoan that is conceded to be the highest creature in the scale of life this world, as yet, has ever seen. This is the greatest miracle of nature: that a single fertilized cell should have the power to draw from nowhere the twenty-six trillion cells of the viviparous human, with all the necessary structures and organs that make up the complex body called Man!

In the symposium entitled "The Evolution of Man" that was issued by the Yale University

Press, Harry Burr Ferris, Professor of Anatomy at Yale, is the author of the chapter on embryology. He also is struck by the amazing miracle of reproduction, and finds that his only accepted theory has broken down, and left the materialist without any crutch upon which he may lean. On page 42 of the above cited volume, Ferris says:

“As a result of fertilization the egg cell has the power of almost indefinite multiplication and the still more marvelous power of differentiation so that its descendants are not all alike, but some form nerve cells, others gland cells, still others muscle cells, et cetera. This differentiation in structure is accompanied also by a corresponding functional differentiation. *It may be possible to explain many of the processes of life on the mechanistic, or physico-chemical basis, but it is difficult, at present, to explain reproduction on this theory.*” (Emphasis mine).

It is indeed “difficult” to explain reproduction on the basis of mechanism! If you have ever watched the marvel of cell division and the process of mitosis you must have been struck with the evidence of design and creative ingenuity contained in this amazing process. A single cell divides and there are two cells, these twain divide and there are four cells, then there are in turn eight cells, sixteen, thirty two, sixty four, one hundred and twenty eight, and

so by a process of doubling the number until the entire new body is formed. The wonder is further deepened by the fact that while all the cells started from the one fertilized cell called the ovum, which was itself neither muscle, nerve, organic, blood or bone cell, each separate colony of cells produced by this process of division becomes an organ whose cells all have a ponderable and demonstrable difference between them and the cells of any other organ in the same body! Consider also the further fact that while all mammals reproduce this way, the rabbit cells while differing among themselves functionally, are ever and always rabbit cells: the chicken cell may divide to form many organs, but they will inevitably be chicken organs; and that every separate order, genus and species living on all the face of the earth refuses to reproduce by this process any other kind than its ancestors have always been. Carefully considered, the ridiculous impossibility of the theory of organic evolution is demonstrated in that unalterable fact alone with sufficient force to obviate its biological possibility. Yet it is in this process of cell-creation that the evolutionist sees "recapitulation!" And that, in spite of the fact, that an embryo never contains a single cell that may be confused with any cell of any other embryo of another species, or that could ever belong in an embryo of another species! What, then, is the

basis of this "recapitulation?" It is based entirely on the supposition of resemblance.

Resemblance, however, does not imply relationship! Similarity is not scientific evidence. Resemblances are superficial, and if there is anything that science is *not*, it is above all else, *not* superficial. In the West we have a mineral (iron pyrites) called "fool's gold." It bears such a close resemblance to the precious metal that the ignorant and unlearned have been confused, and imagined relationship upon the sole basis of similarity. But the "fool's gold" is worthless, even though it resembles the precious metal. If we are to discuss a scientific demonstration, let us stick to evidence that may be called scientific, and score such mental immaturity as similarities! But since this is the sole basis of the argument of the recapitulationist, let us fairly set forth his position, that we may consider its strength or weakness.

#### THE THEORY OF RECAPITULATION

has five strong points, or general divisions. Every student is familiar with them, but for the purpose of clarity we will set them forth in order, so that we may thus consider them. As expressed by the school of organic evolution, these points are:

1. The human embryo begins life as a protozoan.

2. The human embryo lives as a fish, in an aqueous environment.

3. The human embryo, at one stage of development, has gills like a fish.

4. The human embryo, at one stage of development, has a tail like a puppy.

5. The human embryo, prior to its birth, bears a confusing and close resemblance to the embryos of other mammals; in some instances, so close it is difficult, and even impossible, to distinguish between them.

In order to demonstrate the fallacies of these five premises, we will consider them in order and examine their scientific truth and value.

That the human embryo begins life as a protozoan is an absolute mis-statement, and is not a fact. In this case the wish is parent to the thought. The contention of the organic evolutionist makes this necessary, as the theory is based on the supposition that the various orders of life with which we are familiar today began in the womb of time with a common ancestor, such as the amoeba. To establish the theory of recapitulation it is necessary, then, to start the embryo the same way. But the human embryo does not begin its career as a protozoan, or single-celled animal. It is true that the embryo is at first a single cell, or rather a conjunction of two single cells, but these cells are not protozoa, they are the reproductive cells of the Genus *Homo Sapiens*. A



protozoan is a single-celled animal whose life processes are contained in that one cell, and whose entire organic functions, if we may refer to them as such, are consummated in that single cell. These protozoa are legion; but marvelous and diversified as they are, there is not a single individual protozoan in the category of nature that any trained scientist would *ever* confuse with a human ovum or spermatozoon! Not even the most superficial observer would ever classify any of the many known protozoa as a human spermatozoon or ovum, or vice versa! Such an ignorant proceeding would bring down on the perpetrator the scorn of the entire scientific world, and that justly. For the human sperm is not a protozoan. It is a flagellate cell, and may never be confused as other than it is, the reproductive cell of the chief mammal—man. The same of course, is true of the female reproductive cell, the ovum.

The spermatozoon is composed of two main divisions, the flagellum, or tail, and the cell proper, which is the head end. The flagellum is simply the motor that drives the sperm on its way, and the head of the spermatozoon contains all of the major divisions of the cell structure; the nucleus, the chromosomes, the centrosome, etc. It is a true and complete cell. The same may be said of the ovum, the female reproductive cell. Both these individual cells contain *all the elements of a complete cell of the human*

*kind, none of which are found in any protozoan. Fundamentally the two orders, the protozoa and the sperm of any mammal are as unrelated and unlike as chalk and cheese. We note that the protozoan is a complete organism that becomes an adult of its own kind, that it eats, ingests, and reproduces vital young of its own kind. It is born through a process of "embryology" of its own and after the law of its own nature, and dies exactly as any other living creature. The spermatozoon, however, cannot be included in any such category as this. It cannot be said to be "born". It neither eats nor grows to maturity, but in its cycle of life functions only by the energy imparted by its creation in the gonads, and dies without reproducing any progeny like itself. Its sole function is the fertilization of the ovum of its own kind, and it is sheer folly, or crass ignorance, to label it a protozoan, or compare it with that order of individuals. The human individual begins its life cycle not as a protozoan, but as a fertilized human cell.*

Equally fallacious is the second proposition of recapitulation; that the embryo passes through a stage when it is comparable to a fish, living in an aqueous environment. It is literally childish nonsense to so speak of the fetus of any mammal known to science. It is true that the fetus is enclosed in a sac that is filled with fluid, but this fact cannot be interpreted to demon-

strate a fish ancestry without making the demonstrator ridiculous.

The wall of this sac is made up of two membranes, the inner of which is called the "amnion." The process by which the amnion is produced necessitates some attention here before we make a close analysis of this fish argument, so we must digress for a few lines to remind the reader of this process. After fertilization, the rapid division of the cells, as we noted above, soon produces a solid round colony of cells known as the morula. There is an uneven development that causes rapid growth on one side to exceed the development on the opposite side, and in this extra mass two cavities form. One of these becomes the yolk sac at first, and the alimentary canal in the fully matured fetus, but the other cavity becomes a sac that entirely surrounds the embryo later, which last sac is called the amnionic cavity. This is the housing of the embryo, its protection, and its dwelling place. So we see that the fertilized ovum not only produces the embryo itself, but also by cell origination actually provides the house in which the embryo dwells in safe security. But before these two sacs are fully formed, some of the cells of both sacs branch off and differentiate into two layers, called the ectoderm and the endoderm. From this layer called the ectoderm, there are then developed the cells that form the primitive streak, the first

prophetic forecast of the vertebral structure later so essential to the adult individual. Then a third layer of cells is created along the primitive streak, between it and the outer or ectoderm layer, and this third layer is called the mesoderm. Note this amazing wonder: two cells have united in the process of fertilization, the ovum and the sperm. These have now developed three distinct types of cells, each with typical characteristics that mark it as different from the other two classes. These three, the primary germ layers, produce all the organs, muscles, bones and various parts of the body in the bewildering process of embryological development.

The first of the cell layers, the ectoderm, forms in time the skin, hair, sweat glands, teeth enamel and the sensory parts of the sense organs. The middle layer, the mesoderm, forms the skeleton, the muscles, the tissues and the tendons, the blood distributing system and the sex apparatus. The third layer, the endoderm, develops into the cells of the thyroid and kindred glands, the lungs, the liver, the pancreas, etc. Each has its own function and contributes the equally essential parts to the developing individual, but all owe their origin to the same fertilized cell, of which we must not lose sight in our present brief and simple study.

Again we pause to wonder how any sane mind can see in this stupendous process anything

but the outworking of an inwrought design! Carefully planned on a sound mathematical basis that never alters, continuing age after age with no help from any outside source, this process has ceaselessly functioned in obedience to the command of the Creator whose mind and intelligence planned it all. Never losing any of the inexhaustible power its every ancestor possessed, the vast order of mammals continues to witness in this process to the truth of the greatest sentence ever written in biology; "Each after its own kind!"

All of the above differentiation takes place in that sac mentioned above, the amnion. In this encasing bag the fetus dwells in safety and shelter, literally floating in a cushioning fluid that is called the amnionic fluid. This is the fact upon which the second statement of the recapitulationist is based; the fetus *does* dwell in an aqueous environment. But not as a fish! for no fish could ever exist in the environment which is absolutely essential to the life of the embryo, as there is no free oxygen present there in the amnionic fluid. Note that carefully; life would be impossible for anything but the fetus in this amnion, and each fetus must be in the amnion of its own kind. The necessity for this we shall see in the analysis of the amnionic fluid.

Before proceeding further with the question of the fish stage, we must pause to introduce the

fallacy of the gills that have been so widely advertised as proof positive that the embryo of man is re-enacting its ancient experience of organic evolution. Carefully, calmly, and forcefully I desire to assert that *the human embryo does not possess gills*; and the teacher who so asserts is either a deliberate falsifier, or is woefully ignorant of what is common knowledge among research biologists today. I am scarcely able to conclude which is the graver charge to make against the teacher who clings to this outrageous falsehood; ignorance or lack of integrity! Either is bad enough, and it is impossible to escape the stigma of one or the other if falsehood is taught in the place of truth!

Even in past days, when our modern biological knowledge was not in the possession of the teaching profession, it was never correct to say that the embryo had gills. The most that any careful and truthful contender could say was that the fetus was in possession of branchial arches, which are the bony ridges that support the gills in the fishes. But even that much cannot be said now, as these so-called branchial arches are now accepted as pharyngeal arches instead of branchial.

Branchial arches, and gills, have to do with the process of respiration, and thus would be absolutely useless to the developing fetus, which has no need to breathe. All the processes of the embryo are consummated in the blood stream



of the mother through the marvelous specialized organ, the placenta, and the fetal blood is kept vital by the lungs of the mother.

But while the embryo has no need of respiration, it does have pressing need of nutrition! And thus we have the pharyngeal arches. The pharynx is that part of the alimentary tract that joins the esophagus, and the pharyngeal arches of the embryo are the rudimentary feeding device for the early stages of gestation, when there is no physical union between the embryo and the blood stream of the mother. It is at this stage that the amnion forms villi, which form a dendritic conjunction with the fetal villi, and all the substance that can be transferred from the mother to the embryo is limited to the volatile. That is to say by the process of osmosis alone, can these amnionic and fetal villi function, and the embryo must be fed!

At this stage we make an analysis of the amnionic fluid, and we find it is pure food! It is composed of fats, carbo-hydrates, proteins, etc., all in solution. Food in a liquid form is the immediate environment of the embryo and some special apparatus is essential for the appropriation of this food. For this reason the pharyngeal arches appear. It is evident that food is absorbed through this apparatus, and after the development of the method of nutrition through the fetal bloodstream in the pla-

centa, these arches disappear. Also, the amnionic fluid changes so in character that it is no longer fit for food, as after the arches disappear, the fluid has a high content of uric acid. The purpose of these arches, then, is the feeding of the embryo. They are not gills in any sense of the word, and differ from gills as much as the organ called the stomach does. They are there at this stage of embryonic development for the sole purpose of nutrition; and it is only ignorance or dishonesty that will refer to them as gills.

There is not a single function or organ or development in the embryo that does not have a very definite purpose in the growth of the fetus, and these arches are just a case in point. Yet it is here that so much dishonesty is practiced that we cannot help concluding that the devotee of the theory of organic evolution is more concerned in advancing that theory, even at the expense of truth, than he is in teaching the facts of science. Let me cite an instance bearing on this statement.

Some time ago I was lecturing on these and kindred subjects in a Southern California city near my home, when I was questioned at some length by students present from some several colleges and two universities. The result of the conversation was a visit from a group of the boys, who came to my laboratory to observe some things I had promised to show them. We

began with methods and patterns of mitosis, and ended with cross sections of the human embryo, especially of the head region. They left with several antiquated ideas forever discarded, and one or two left in some heat because they had been kept in ignorance, and literally misdirected in their thinking. The following week one of these lads was in his class of comparative anatomy, where he was taking a post graduate course. He began telling his teacher some of the things he had observed, and concluded by saying he had been convinced the embryo did not have gills like a fish, or any other kind of gills. He said further that Rimmer had showed him that the so-called gills were not even branchial arches, but pharyngeal arches. The professor smiled and asked, "Did Rimmer advance this as a new or original discovery of his own?" The student replied, "I am not sure, but perhaps he did. Why do you ask?" To which the professor replied, "Well, if he did, please inform him that I knew that two years ago!"

The student was surprised and asked, "You mean you knew that these developments on the embryo were pharyngeal arches, and not gills, and knew this two years ago?" "I mean exactly that," said the professor.

In some surprise the lad enquired, "Then, if you knew that two years ago, *why did you tell us last Friday that the human embryo has gills*

*like a fish?*” To which the professor replied, “I do not care to discuss this further!”

A cornered liar rarely does! At the very beginning of this paper I stated that the expert did not always deal fairly with the credulous layman, and this is a most striking case in point. And it is not an isolated or unusual case, for I could multiply this illustration many times over. I recently had the privilege of debating this question before one of the largest medical associations in the United States, and the evolutionists are so well aware of the weakness and falsehood of their position that fourteen “eminent authorities” lacked courage to debate the evidence of evolution from the standpoint of embryology before such a technical audience. The fifteenth man, a man of splendid scholarship and with the courage of his convictions, debated with me there, but on the general field of biology, and not the specific field of embryology. The case for organic evolution has collapsed in this field more woefully than in any other branch of the biological sciences.

The “proof” has gone with the gills!

In the first stages of my own research on this subject I was profoundly amazed to discover that the human embryo had been so tremendously misrepresented, not only in the matter of the gills, but in the matter of a tail as well! I thought I had an anomaly when I saw one that did not have a tail, and even today students as

far advanced as medical college are still talking about the tail on the human embryo. Which same does not really exist!

A tail, you know, is a caudal appendage. In physiology the term has exact significance, which definite meaning must not be obscured by poetical or careless references that call a rudimentary or developing leg a tail. The tail has a definite structure that is never found in the embryo, the text-books to the contrary notwithstanding. There is this basis of truth alone in the argument of recapitulation: at one stage of the development of the embryo when it has about the shape of an adult lima bean there is an unusual activity at the posterior region of the primitive streak that may be strained to resemble a tail in mounting the embryo, but these cells later become the legs. There is no animal known to man whose tail develops into legs, and the contention that this is true in the embryo is a pitiable evidence of the weakness of the case for recapitulation.

Even more strikingly unscientific is the fifth contention, that the embryos of various mammals so closely resemble one another that the eye can scarce determine the difference between that of a man and that of a pig, or sheep, or rabbit, or monkey. Almost every text book of biology that deals with the question of embryology has a page of pictures with the various embryos in parallel columns, showing

their striking similarity! As I write I have such a text book here, with the embryo of a rabbit in one column, a pig in the next, an ape in the next, and a human in the fourth. And in the pictures these various embryos do so closely resemble each other that the name at the top is essential to differentiation. *But in the picture only*: in life, the student or the scientist would not be confused, in spite of what ignorance would like to contend. For these pictures are all "schematized!" That is a wonderful word, coined by the chief priest and foremost prophet of the organic evolution cult, even the eminent Haeckel himself. After he was accused of falsifying the delineation of certain embryos he stated that he had "schematized" them to conform to his argument, as that was customary in such cases, and they have been "schematized" ever since! But an honest photograph, or the physical embryo itself, tells a far different story!

It is still a common fallacy, to say that the human embryo is so similar to the embryos of the various animals that it is difficult to determine which is human and which is animal. When I was engaged some time ago with Dr. Edward Adams Cantrell, then Secretary of the Science League of America, debating the theory of organic evolution, he stated that when he was in school the professor came into the laboratory one day with several embryos, and said



that they had neglected to mark them when they arrived at the laboratory, and although they were all from the different species, and only one of them was human, there was no way to tell one from the others! And this supposed fact was advanced by the doctor as evidence of the close relationship of man and the beast, and also as proof of the theory of recapitulation.

That the world of science in general is capable of recognizing the pitiful fallacy of such a contention is clearly illustrated in the following quotation from "Critique du Transformisme", by Professor Vialleton, as quoted by Christabel Pankhurst in "Seeing the Future." Speaking specifically on this subject, Prof. Vialleton says:

"....Instead of recapitulation, what really takes place is a succession of forms, which is necessary to the development of the embryo and is not at all an ancestral repetition. The first forms of the embryo (called ebauches) cannot represent ancestral organs, because no ancestral organ could exist with the known constitution of these ebauches. They are absolutely incapable of functioning otherwise than as constituent parts of the embryo, playing, as such, a part necessary to the development of the whole. The embryonic ebauches are parts necessary in the embryonic to the anatomical development of living beings, and are not ancestral forms repeated in souvenir of the past.

"The young embryos of superior animals resemble only the young embryos of inferior animals, and do not at all resemble the adult state of the lower animals. In other words, all the vertebrates have common organic rudiments during a very short stage of their embryonic life, and they resemble each other at that moment by these ebauches, *regarded separately*, though not by their form as a whole, which is already different in the divers types of embryos and forbids any confusion between them. But in consequence of a defective interpretation of these ebauches, considered separately, a confusion has arisen which has led to the making of an unwarranted genealogical rapprochement between them. *Thus embryonic mechanism has been confounded with supposed ancestral repetitions.*"

I desire to say, first of all, that there is a method by which any embryo may be classified according to its true species, and that method is available even to a child of six years of age. That method is *let it alone!* By that I mean to say that no matter whether we know what the embryo is to become or not, the *embryo* is never in any doubt about the matter, and will always develop into just exactly what its parents and its ancestors always were!

There is also the scientific method of cytology. It wearies the possessor of even a rudimentary education to hear all this talk of

similarity being a scientific evidence of relationship, when we know that science pays utterly no attention to similarities. These, I repeat, are superficial, and scientific research is "the investigation of the fourth decimal place!" There are several deadly poisons which resemble common table sugar, but that resemblance does not prove relationship.

It is a fact of science, that the embryo of one species does not resemble the fetus of another species so closely as to confuse the investigator. There are scientific methods of cell analysis that determine the species of the cell structure under consideration and these methods are all available as checks on the question of recapitulation. Their answer is unanimous: The human embryo does not recapitulate an animal ancestry.

Even a superficial consideration will manifest the empty mockery of the slogan of the evolutionist, for again we see that Ontogeny *does not* recapitulate Phylogeny. This is a tremendous contention, that the human embryo lives over, or re-enacts, or recapitulates its entire evolutionary ancestry of multiplied millions of years in nine brief months! And all of the recapitulation must be crowded into the first three of these, as by the end of the third month all the structure and organs are completely formed in the embryo. The case is further complicated by the fact that in addition to

the millions of years, there are literally billions of forms to recapitulate.

There have been approximately one hundred and twenty-five million species on the face of this planet in the vital life period of the earth's history, and according to Wassman the transmutation (evolution) of a closely related species into its next higher or subsequent species would require at least seventeen hundred mutants, or variants, commonly called links. One hundred twenty-five million species multiplied by seventeen hundred mutants, gives the stupendous number of two hundred and twelve billion, five hundred million definite life forms that must have existed to transmute the amoeba into man, and the human embryo only passes through fourteen stages of change all told! Can this be "recapitulation," that reenacts just one form in every fifteen billion, one hundred seventy-eight million, five hundred forty-one thousand, four hundred and twenty-eight different ancestral types? The idea is so preposterous we can conceive of it only as the wildest dream of a disordered intellect, and not as an established fact of science. Which latter it most certainly is not!

Consider these further and positive facts, all of which are scientifically established:

First—the ova, or female reproductive cells differ in every species. There is a positive identification to be made of the ova of various cats

as cat ova; the ovum of a dog may never be confused with that of some other species, and the human ovum is a type separate to the human species alone, and so for every species.

Second—the spermatozoa of all creatures differ from those of all other creatures, not of that same species. It is as easy for the trained eye, aided by the microscope, to tell the spermatozoa of one species from those of another as it is for a sailor to tell the difference between a battleship and a ferry boat.

Third—Fertilization is possible only between the ova and the spermatozoa of the same species. There is an ectoderm, chemically impregnated, that covers the ovum of a given species, and only the sperm of that same species carries in its apical head the correct solution to penetrate that protective ectoderm. Thus it remains today as it ever has been in the past: kind reproduces after its own kind, *and only with its own kind*.

Fourth—In the carrying bodies called chromosomes the chromatin differs materially according to species. As it is this chromatin that bears all the tendencies to inheritance that have come down through innumerable generations in each species, the whole process of embryology depends upon this chromatin. Differentiation is constant, and never even slightly confused in the entire fetal stage *of each species*, because of this individualized distinction of chromatin.

Fifth—The very foundation of the process of embryology, the process of mitosis, differs materially in the mitotic pattern in various species, so that there is a check on the group history even here.

Sixth—*At any stage of their fetal development*, a cytological examination of the embryo of any species will clearly show its startling differences from the embryo of any other species in the vast realm of biology. To the honest investigator there is never any moment of doubt. Each embryo is so distinctly an embryo of that particular kind, and no other, that to the scientist there is never any shadow of question as to its ancestry or its destiny, as an individual of a specific species.

Finally — As the developing embryo always and inevitably turns out to be an individual of the same species its fixed ancestry has always been since the beginning of time, it is evident that the organic evolutionist is again wrong, and that the theory of recapitulation is so thoroughly disproved we may today say—*Ontogeny does not recapitulate Phylogeny*, and in the place of this unfounded contention, put the old, old truth, which Moses stated in such clear terms:

“Each after its own kind:” as the Creator ordained.

THE THEORIES OF  
EVOLUTION AND THE  
FACTS OF PALEONTOLOGY





### III

## THE THEORIES OF EVOLUTION AND THE FACTS OF PALEONTOLOGY

**P**ALEONTOLOGY, says the dictionary, "is the science that deals with the life of past geological periods." So the sources of this science differ from the sources of biology, or zoology, or botany, in that the individuals under observation are no longer alive, but are in a fossil condition. Ages have fled past since the creatures whose fossil remains we now observe were alive and sentient, and in the science of paleontology we have the evidences of life *as it once was*, rather than as it now is.

But "paleontology" is really more than just what the dictionary thus suggests. It has proved to be the Waterloo of the theory of evolution! In the limits of this field of research the theory of organic evolution chose to make its most notable fight; and here in this field the theory met its most tragic defeat. The facts of paleontology really constitute a refutation of the entire basis of the theory of the transmutation of species.

It has been estimated (Wassman) that there have been one hundred twenty two million, five hundred thousand species of living creatures in past ages that are now extinct, and this vast aggregation of individuals, or such of them as remain in fragmentary or fossil form, constitute the material of the paleontologist. The number of individuals that have lived in this vast mass of species, and in the geological periods that form what is known as the vital life period of the earth's history, is of course practically infinite. No mind can comprehend the successive generations, the accruing mass of individuals in just one species over a period of merely ten thousand years; how much more impossible then to effectively contemplate all the individuals in a hundred million species, over a period variously estimated to be from one hundred million years, to two thousand billion years!

A pair of field mice, for instance, if all their progeny lived, and the family of this one pair produced at their normal rate undisturbed for one calendar year, would in those twelve months witness a family of a little over a million individual descendants! This tiny rodent is not unusually prolific when contrasted to other wild creatures, especially those of past ages, if we can judge by the fossil records. So that even if unnumbered millions of individuals in each species so perished in every generation as to leave no paleontological trace, there must still

have been multiplied billions of others that somewhere left an evidence of their existence. We suggest this merely to remind the reader that the sources of paleontology are by no means limited, and that there is a host of material from which to draw scientific conclusions.

In the Trabucca ledges, which are so well known to the author, in one exposed section that is about a half mile long and some six hundred feet high there are exposed to the gaze of the geologist who is fortunate enough to study this stupendous deposit *not less than ten billion individual fossils!* and no man can say how deep through the mountain the deposit may extend. From this one source alone paleontology may well draw certain conclusions, if mass of evidence is a factor in deduction of scientific truth. And after years of interested observation we venture the assertion that nowhere in the science of paleontology has the theory of organic evolution been established or even helped.

A generation ago it was confidently asserted that when the records of the fossil life had been fairly well gathered they would establish beyond the shadow of a doubt the truth of the theory of the transmutation of species, and the rise of new genera through this process of evolution. The contention, we must admit, seemed well founded. Not only well founded, but also essential, as every other physical science had

failed to produce conclusive evidence of the process of evolution. It was also the logical conclusion, that if the fact of evolution was to be established, that science which deals with life that has been, should hold this needed proof.

The record has been assembled. The tale is told, and the false contentions of an unscientific dogma have again met defeat. For in the science of paleontology the theory of organic evolution met the most drastic refutation it has ever experienced.

### THREE IMMUTABLE FACTS NOTED IN THE STUDY OF PALEONTOLOGY

The first of these is the absolute fixity of certain species. In the light of the claims made for organic evolution this fact is fatal to the hopes of the theory. It is the contention of the evolutionist that life has progressed from the simple forms to the complex through an infinite number of gradations. Through myriad changes the protozoa evolved into the metazoa: and this supposed progress has been dramatically pictured in the slogan "From the small to the large!" Uncountable millions of individuals have lived and died to make one slight change, says the theory under discussion, and the new forms thus slowly arising have in time produced the highly specialized species and genera we see in the universe today. If this is true, then in the science that deals with the living creatures

of *past ages*, we should be able to trace that process of development and change.

The contrary, however, is the case. Individuals *do not progress* gradually into new forms, varieties and species; but individuals seem to insist upon the right to be, and remain, just essentially what their ancestors ever have been. The absolute unswerving constancy to type is the most striking aspect of the fossil record, and therein we see without exception the miracle of obedience to Nature's law, that like shall produce like. We know that that is now the case, and in the records of paleontology we also read that it has ever been the case. Apparent exceptions to this law will be dealt with in the body of this paper. At this point we desire simply to stress the fact that the so-called law of evolution is not now operative, and has not been in operation as far back as the records of the rocks may be traced.

The evolutionary school of geology has carefully worked out a time factor for many ages past, and without prejudicing our position by acquiescence, we will conform to their dogma purely for the sake of meeting their arguments on their own ground. In this manner we desire to show that as far as the mind of man has been able to explore there has been no evolution of species. Rather in place of that exploded theory there has been a remarkable fidelity to



original type that establishes the general phenomenon of the fixity of species.

The first life appeared on this planet, according to the chronology of evolution, in the far away period called the Cambrian. So utterly impossible is it to make any kind of a reasonable guess at the probable age this represents we will not even make the attempt, but will satisfy ourselves with the observation that it is a tremendous sweep of time. Certain schools of geology claim it is a hundred million years, others say it is a thousand million years, others of us are more conservative and content ourselves with simply saying "We don't know," which we are convinced is by far the wisest course. It is evident, however, that the span of time is positively inconceivable to the human mind, and we cannot truly apprehend the enormous gap that stretches between the Silurian period and the age of man.

We have, however, some evidence that certain species common to our day were in existence then. There are innumerable specimens of the Silurian coral in existence, and we will note their testimony to start with. The coral islands are the result of the simple process of biology. Coral is the body of a small insect, and by the simple process of living and dying these minute creatures have succeeded in building up islands, and even continents may be the result of their lives. It takes literally myriads of these tiny

animals to make even a lump of the calcareous deposit we commonly call coral, and it defies the imagination to seek to estimate the countless number required to make a habitable island rising out of the floor of the sea. We know a great deal about these polyps that make the coral, and their morphology is pretty thoroughly mastered by zoologists.

The coral polyps have been here industriously working since the far away Silurian period. This we know by the discovery of innumerable specimens in fossil form, and we have inland sections where they may be excavated almost by the ton. Places where the sea once was, but where desert now prevails. Just how long that has been no one can say; *but we do know that evolution has not operated among these polyps in that immense span of time*, as the present day descendants of the Silurian coral animals are identical with their Silurian ancestors! The time element has ever been the great retreat, and support of the organic evolutionist. When we say that we do not see evolution in operation in nature about us, the reply invariably is to the effect that the process is so slow millions of years are required. Well, in this case, according to their own claims, they have them. Not only millions but *billions* of years have gone by since the Silurian period, (according to their own school) and there has been no evolution in this animal.

From the Silurian period we also draw the evidence of the primitive algae, and we find the same condition existed then as exists now, the algae have not evolved in those multiplied millions of years. The Chlorophyceae were especially numerous in that period, and living as they do today in such profusion, form an interesting field for contrast and research. What happened here, if the law of evolution is a true law? How does it happen that the lowly alga still remains the same as its fossil ancestry ever has been? All down through the ages these evidences have been preserved in the living rock, to testify to those whose minds were open to the reception of truth, that species may rise and wane, new varieties may and do appear, but life *does not* evolve from the simple to the complex. The algae are today as simple as they were in the very dawn of time.

These are not exceptional cases. Back in the Carboniferous age the crayfish were abundant, and they are almost as numerous today. These crustaceans are found in profusion in the fossil bearing strata of the far away Carboniferous period, and their testimony is the same as the record from the preceding age, they are the same today as they were in antiquity. Among the oldest living orders present today, they also speak of the fixity of species.

In the state of Montana, there is a spectacle that every scientist in the world should see,

the famous Grasshopper Glacier. It is amazing that so few paleontologists seem to realize the existence of this famous glacier, but the author has talked with many men who are reputed authorities in this field, and never found one who had personally investigated this site. The glacier gets its name from the characteristic fossil it contains, the humble grasshopper.

At one time this entire region was an Eden of tropical splendor. All the fossil flora of this region are tropical, ferns and palms abound. This once was a vast and magnificent lake, and life literally teemed along its shores and in its depths. Now the iron clutch of eternal winter has bound the waters that once were warm and living, and a white death prevails. This glacier is a relic of the great ice age that once visited this continent. How long ago that was we will leave to the evolutionary philosopher to state; we personally have no way of telling. According to their dogma it was a long, long time.

It is evident that this ice age was not a gradual encroachment, but that it came catastrophically. In the day before this ice age came the region of these mountains swarmed with grasshoppers, and it is the custom of these creatures to migrate ahead of a slowly encroaching cold. But when the lake turned to a glacier these billions of grasshoppers were surprised by the sudden freeze, and they fell into the lake in uncountable numbers. As the lake froze from

the top to the bottom these insects were preserved in a matrix of ice, and they remain there to this present day. They were of the family Acrididae, which family is still numerous on this continent, and these fossil specimens may be procured in unlimited quantities by those who care to go and get them. The main point of their introduction here, however, is the evidence they offer as to the fixity of species. These pre-historic grasshoppers, so marvelously preserved for our study in these early ages, are identical with their twentieth century descendants. Since before the Ice Age, to this very hour, the Acrididae have failed to obey the supposed-law of evolution, and their morphology remains as it ever has been.

The author has a noted collection of moss agates that are also of interest in the discussion of this issue. No one can say how old the moss agates are. Concerning their formation the student may learn many things, as for instance their origin. We know that they are a variegated chalcedony, formed by the action of water rising through certain bodies of chemical salts in the earth. The water evaporates and leaves the mineral contained therein to precipitate and form the agate, a semi-precious gem stone. If the water contains also certain mineral oxides, such as oxide of iron, zinc, or lead, these oxides having no affinity with the chalcedon are isolated into exquisite patterns

that look like moss giving this stone its common name, "moss agate." When we seek information as to the date of their origin the details are not so specific. We are told that they were brought to their present location by the action of glaciers: that they probably originated many leagues away from where they are now found, and that "they were made when the earth was young!"

When the earth was young! That is a long time ago. The author has had the privilege of knowing a moss agate that contains a mosquito! There, forever imprisoned and eternally preserved in the agate formation is our common friend, the mosquito. Let us join in a paean of praise that the "law" of evolution did not work here! If the agates were formed when the earth was young, and the mosquitoes then were as they are now, what a plight the resident of New Jersey would be in today. From the simple to the complex would mean that the mosquitoes today would be as large as the eagles, at the very least!

The law has not worked in this species, however. The mosquito imprisoned in the forming agate "when the earth was young" is identical with its descendant of the present day; it has not progressed from the simple to the complex.

There are other substances that have provided a perfect matrix for the preservation of fossil forms, notably the substance called am-



ber. In pre-historic times there were certain trees much like the conifers of the present time that secreted a gum, or resin, similar to pine or spruce gum. This gum dripped from those ancient trees and fell into the ground where it became solidified over the passing ages, and this fossil gum is called amber. Trees in that day were the favorite ranging field of ants even as they are today, and in this sticky pitch innumerable of these pre-historic ants became entangled, so that when the resin petrified into amber the ants were fossilized therein. In this matrix the ants are perfectly adapted to observation, and we find that the ants of the epoch when amber was but pitch on trees, were practically identical with the ants of the present day. They too have failed to progress from the simple to the complex. Evolution somehow failed to include them in its program of advancement from the small to the large, and we see once more the fixity of species established.

The ants are not the only insects that are found in this matrix of amber. It is presumed that the amber was largely formed in the Tertiary period, principally from the tree known as "*Pinites succinifer*" and its allied forms. Many varieties and species of insects were trapped in the resin of these trees, and all tell the same story of the constancy of species and genus. Indeed, the author has one such lump of fossil gum that contains eleven individual fos-

sils, comprising seven different species. The fossil gum is clear, and its qualities of refraction are such as to allow examination under the lense of a binocular magnifier, and the microscope attests that there has been no evolution in the species contained. They have one and all failed to evolve from the small to the large, from the simple to the complex.

The most prolific fossil strata of the Pacific Coast are undoubtedly the Eocene. In the region of the Coast Range mountains, along the entire coastal plains, on the plateaus and the mesas of the coast we find the fossils of the Eocene in tremendous profusion. They range in size from the tiny territullia to the giant sharks and immense whales that have left their bones in profusion upon our mountain tops. It is a spectacle to cause wonder always, when we find sharks and whales peacefully imbedded in living rocks seven or eight thousand feet above sea level, and thirty or forty miles away from the nearest beach! They must have been there ■ long, long time; and in all that span of years their testimony is the same; evolution has passed their innumerable progeny by. Not one of them has progressed from the simple to the complex.

Living in the Pacific Ocean today are practically all the species of genera found in fossil form in the strata of the Eocene. That is to say the fossil ancestors have left present day

progeny that differ from them in no whit; evolution has passed them all by. Not in a few scattered or isolated cases, but in innumerable species we see the true law of life established in the records of paleontology: the law of the fixity of species.

The laws of Nature are immutable. They are never rescinded or rendered inoperative by later thought, and they operate with inexorable precision. It is absolutely inconceivable that the law of evolution should operate in a few certain species and miss all the rest, but this is the present contention of the evolutionary philosopher. If the law of evolution ever operated it would be in force now, but as far back as the records of the rocks extend it has never been in operation.

The reader will perhaps at this point pause and enquire, "How about the horse?" and we can only plead for a little patience. We are rapidly coming to an examination of the so-called perfect demonstration of the case of evolution in the genus equus. We will examine the horse when we arrive at the logical point in our discussion.

*The second fact* we note is the evidence of degeneration. The law of life as set forth in the science under discussion is *not* from the small to the large, but seems on the contrary to be the exact reverse of that procedure. Where the creatures who have lived and have

left progeny that have persisted to our present day, so as to allow comparison, do not remain fixed, they invariably degenerate. This is seen in the entire realm of paleontology, but is such a stumbling block to the theory of evolution that the advocates of that philosophy shy from any mention of this common phenomenon. The fact of degeneration can be well established from the most irrefutable evidence.

The largest creature of the genus *Elephas* the earth has ever harbored is not the familiar "Jumbo" of the modern circus, but the mighty *Elephas imperator* of the past geological age. This mighty monster dwarfs the modern elephant into a veritable pigmy in size, and is the largest of its genus yet known. One of the finest skeletons of this great beast to be seen today is in the Los Angeles County Museum of Arts and Science in Exposition Park, Los Angeles, California, and was dug from the famous Rancho La Brea pits within the city limits of Los Angeles. We may presume that the far famed California climate had something to do with the growth of this giant; at any rate we feel sure the local Chamber of Commerce would so state if they knew of the presence of this great and monstrous creature within the sphere of their interest! At any rate, here is a notable refutation of the so-called law of evolution; the elephant is proceeding from the *large* to the *small*!

In the day when this same imperial elephant roamed this terrain, there dwelt with him in companionship and friendship the giant sloth, called Megatherium. The sloth of the present day is a small creature, weighing only a few pounds. The largest one the author ever examined personally weighed only thirty pounds, and he was unusually large. Yet the sloth of the Pleistocene age literally weighed tons! Specimens have been recovered that weighed four tons, and many that weighed from two to three tons. What happened here? This creature has not evolved, he has degenerated at a tremendous rate. If the law of evolution is from the simple to the complex, the small to the large, and this law had applied to the sloth, that creature would today weigh from six hundred tons to eight hundred tons, *if it had evolved on the same proportion that it has shrunk!* The sloth, alas for the theory of evolution, has degenerated from the complex to the simple, from the large to the small, and is a living refutation of the philosophy of evolution.

We are all familiar with the friendly insect that buzzes through the evening twilight and about the lakes and swamps and streams, called variously the dragon fly, mosquito hawk, and in the language of science the order Odonata. Perhaps the most common of these in our sphere is the *Diplax elisa*, which feeds upon gnats, mosquitoes and small flies which it

catches and devours on the wing. A great many interesting things are known by the general public about this insect, most of which are not so! Such as the erroneous idea prevalent among children that it buzzes in a child's ear and makes him deaf; that it gets in a little girl's hair and tangles it all up or that it is harmful to unwary humans. On the contrary it is one of the most beneficial of the predaceous insects, as it not only feeds upon the obnoxious mosquito in the adult age, but the larvae of the dragon fly feed also upon the larvae of the mosquito, thus rendering a two-fold service to mankind in general. How few of us realize that the dragon fly is one of the most ancient orders at present occupying the earth in a living form. Fossil dragon flies are well known, the largest of which have a wing spread of eighteen inches!

Here indeed is degeneration with a vengeance! From eighteen inches wing spread down to four inches is certainly *not* progress from the small to the large, the simple to the complex. That so-called law was evidently gratuitously evolved out of the need of such a law to sustain the theory of evolution, and is not based on fact. In this respect at least, the spurious law has much in common with most of the fabrication upon which this false doctrine rests its tottering and wobbling structure: all the evidence is against it!



The late Dr. Willis Lee, of the United States Geological Survey, was an ardent evolutionist, and was constantly seeking evidences that would sustain his theory of life origin. About the strongest statement he made was based upon the fact that the ancient reptiles called dinosaurs apparently possessed a gizzard like the modern fowls of the twentieth century. Upon this rather sketchy evidence Dr. Lee said that "the dinosaurs were the lineal progenitors of the modern fowls, and since the reptile ancestors possessed a gizzard it is not surprising that their present progeny also possess this same organ for the reduction of food." These are his literal words, that the dinosaurs were the direct lineal progenitors of the fowls. Now without accepting his conclusions, to which we do not subscribe, let us follow the argument of this eminent evolutionist and see where it finally leads.

This dinosaur, who according to this high priest of evolution was the grand daddy of the chicken, was the most enormous reptile the earth has ever seen. Reaching a maximum length of ninety feet, standing over twenty feet high in the front shoulders, and weighing eighty-four tons or more, as in the case of *Brontosaurus atlantosaurus*, its very size stupefies the imagination of the present earth dweller. There is nothing to compare with this extinct monster today except the gigantic great whales,

and so few of us have ever seen a really large whale we miss the true conception of living mass they convey.

If the eminent Doctor of evolution is correct, and this ninety foot, eighty-five ton creature was the direct ancestor of the modern fowls, what has happened to the law of evolution that calls for an orderly progress from the simple to the complex? How about the gradual development of the small to the large in this specific case? A ninety foot, eighty ton *reptile*, slowly grows into a ten pound *chicken*, thus demonstrating the evolution, or growth of the simple to the complex! That statement is far more credible in a joke book planned for the colored minstrel show of a past decade than in the pages of a staid volume of physical science. The ratio of degeneration here expressed would demand a chicken that weighed thirty-four million pounds, if the dinosaur were truly the chicken's ancestor, and evolution's law, from the small to the large, really did operate.

Almost every lay reader has learned some things about the great *Smilodon Californicus* commonly called the Saber-tooth tiger. This great representative of the genus *Felis* once roamed this western slope in marvelous profusion, and it has now been stated that the morphology of the late Saber-tooth tiger is identical with the diminutive wild cat of the Pacific Coast! Here again we see the phenomenon of

degeneration, which is the antithesis of the evolutionary process from the small to the large, the simple to the complex.

It is fruitless to further multiply illustrations; paleontology and zoology abound with such contrasts and degenerations. The dread *Tyrannosaurus* has become the relatively insignificant crocodile, the *Stegasaurus ungalates* shrinks to the tiny saurian, mis-named the horned toad; *Tryseratops prorus* leaves his small progeny, the dire wolf of the Pleistocene leaves his smaller present day descendant, and the whole realm of nature rises to testify that creatures that do not remain comparatively fixed, degenerate. And nowhere is there a true demonstration of the process of evolution, that the simple has evolved into the complex, the small has become large.

"How about the horse?" Oh, yes, the horse. We will come to the horse very soon now in this paper, and will give him adequate attention then. We are very familiar with the belief of the average student that the horse is a positive and perfect demonstration of the theory of evolution in the field of paleontology, and we have read the same text books they learned from. But we have also investigated the horse argument, and have much to say about it. Before turning to that examination, however, let us briefly state:

*The third fact*, which is the marvelous evidence of design and intelligence as applied to the creatures that form the sources of paleontology. As we see the appearance for the first time in each rock system of certain specific forms and types of life, we note that they suddenly appear perfectly fitted for the environment in which they first appear. Not that their environment painstakingly shaped them after multiplied experiments with mutable forms, but that they appear *at first* with the same perfection they possess at the last.

The birds appear fitted with wings, planned and equipped for the medium in which they are to spend so large a part of their life on the globe. The fish first appear with scales, fins and gills, perfectly adapted to the aqueous environment that is their place of abode. The truly arboreal simiadae all appear at the very outset with the caudal appendage that is so valuable an aid to climbing, and the first armadillo bears on his frame the impenetrable armor that all his progeny bear. The animals that need them have teeth, and those that do not, have the essential gizzard. Always, wherever an animal appears it comes perfectly equipped for the sphere in which its life is to be lived, and there is no process of evolutionary preparation. Fully formed, perfectly armed, they spring as Minerva from the forehead of Jove, and the vaunted

evolutionary process of age-long preparation is something that the physical creation denies.

Species do not blend into higher and subsequent forms in the record of paleontology, but each species is distinct from each other species, and between each two there is a gulf so impassable that the veriest tyro in research is impressed with its existence. They arise, perfect for their mode of living, suddenly and dramatically, in a manner to be accounted for only on the basis of specific creation. They persist in their present form, clearly allied to their fossil ancestry by unmistakable proof, or else they perish with the same suddenness with which they arose.

The theory of evolution states that the various living creatures, together with all those that have lived in past ages, all arose from one single ancestor. This ancestor, a simple protozoan of the amoeba type, began to feel the first faint stirrings of ambition, and started on that long arduous journey that millions of years later was to result in the production of the crowning animal, called by himself after his arriving MAN. On the way, this process of unfolding that was inherent in the amoeba, incidently produced the one hundred and twenty-five million different species that the earth has sheltered since the process began, and through it all we see the law operating, the simple becoming more and more complex, and the small becoming

larger and larger, until life has passed out of the realm of the microscopic into the macroscopic, out of the protozoa into the metazoa. This process of development is only possible as the procedure is constant, and the small becomes the large. Yet the records of paleontology fail to reveal one single species that originated that way! When we ask the evolutionists to show us a demonstration, and to name one species that possesses a fossil ancestry in accord with this philosophy, they with charming unanimity and childlike trustfulness point their collective finger at their prize exhibit, . . . .  
**THE HORSE!**

It has been the contention of the evolutionist for many years that the entire theory has been absolutely established by the proved evolution of the horse. Here is a case where the small *did* evolve into the large: where the simple *did* become complex! The horse begins his life history on this globe as a little rodent-like mammal about the size of a ground squirrel or a stunted house-cat, and evolves into the two-thousand pound *Equus* of the present day! Truly that is a demonstration worth while, and if that were truly the case it would establish the theory on this one demonstration alone. This primitive ancestor of the horse had four toes on his front feet and three on his hind feet, and was as unlike a horse as we have it today, as any creature could possibly be. True, the first



horse, called Eohippus, appears rather late in the scale of geological time, as the first trace appears in the late Eocene period, when mammalian life had been going on for perhaps millions of years already. (The time guess is not original with the author, we merely stress the evolutionary chronology here.) There appears no ancestor for Eohippus whatsoever, except the naive and engagingly child-like statement of the American Museum, that it probably had "*Hypothetical ancestors with five toes on each foot, and teeth like monkeys, etc.*" Do not take the author's word for the truth of that quotation, but read it for yourself in Guide Book Leaflet No. 36, June, 1927.

Now the evolutionary procedure is to start with this tiny fossil creature and arrange a series of twelve fossil animals into a complete genealogy for the modern horse as we see him today. In order to do this it is necessary to violate every rule of accepted scientific procedure and criteria, but the mistress Evolution must be served, and *honesty and square dealing are secondary issues*. The main thing is to show a constant and steady progress from the simple to the complex, to demonstrate the evolution of the small into the large. In order to do this the horse is an essential witness.

Twelve links. And the evolutionist calls that a complete demonstration! What of the millions upon millions of forms that would be required



for the transmutation of each species into the next subsequent species? What of the billions of varieties that would be necessary for the gradual development of a horse out of a creature that is more like a civet cat than any other living creature? Can intelligence and reason be content with twelve links in so great a gap, and call that a complete demonstration? Apparently all this is beside the question; the twelve links are all that we have. Yet the horse is a perfect demonstration of the entire process of evolution, supposedly.

The weakness of the demonstration is further seen when we remember that the horse is a European animal. Long before man appears on the continent of North America, the horse native to this continent had died out. The present race of horses was imported from Europe after Columbus, and even the wild "broom tailed broncs" of the Western plains are descendants of that old importation. It will be remembered that the Mexican Indians were amazed and dumbfounded when the Conquistadors appeared riding on horseback: such a spectacle had never greeted their eyes before. There was a great deal of superstitious reverence for the men who "sprouted from the back of an animal like trees from the soil" and for a long and fatal period the natives hesitated to attack such apparently super-men.

The amazing thing in our study, however, is the fact that the horse, a European animal, has been provided with an American ancestry. Creatures whose fossil remains are never found in Europe, where the horse comes from, are quietly slipped into the "demonstration" and made to do duty as ancestors for those descendants from across the sea. And where there is a gap in the American fossil record, forms that appear in Europe, *and not in America*, are quietly slipped in, and what chance does the average layman in paleontology have to discern the fraud thus practiced? Thus Hyracotherium is found in England only, and but *one* skull has ever been brought to the light of day. It is sheer folly to build an ancestry on such fragmentary evidence as this, even if the fossil were found on the same continent with the other "links". The folly of this is so evident that later writers disregard Hyracotherium altogether, and start their record with the more prolific Eohippus, which we have in abundance in our American fossil deposits. An American ancestor for a European horse, which was derived by Europe from Asiatic and African ancestors! The true European horse is not the one that was imported into this continent by the early settlers, and differs quite materially in important structural variations from the hybrid we now possess. Again, we note that Orohippus is purely an American fossil, but here it is in the paleon-

tological ancestry of an Asiatic-African-European immigrant! Could absurdity go farther than this?

Yes, it can, for here there is ingeniously inserted into the American record the European fossil *Paleotherium*, which has never yet been found on this continent. With its cousin *Plagiolophus* it was staunchly defended by the eminent Huxley as the direct ancestor of the present horse, but that contention has been exploded and abandoned upon the discovery of more recent evidence. *Meshippus* and *Miohippus* are purely American fossils, never found in the European deposits, but here used to do duty as ancestors for a European horse. But the case is evened up again by the insertion into the jumbled record of *Anchitherium*, a European fossil never found in America. *Hyphippus*, on the other hand is distinctly American, as are *Parahippus*, *Merychippus*, *Protohippus* and *Pliohippus*. The score is slightly in favor of the New World, standing at the present count twelve to four, with *Hipparion* equally common to the Old World and the New. It seems a shame to muddy the waters any worse, but the sad fact is that our quest is further complicated by the presence of two more fossil forms, namely *Hippidium* and *Onohippidium*, which only occur in South America. Truly the perfect case of the horse gives this poor creature a varie-

gated ancestry, geographically speaking, at least.

It is a fatuous proceeding to attempt the construction of a genealogy in this manner, and is an amazing demonstration of the weakness of a theory that has to rely upon such a flimsy structure of spurious evidence as this. In the first place, we have seen that the record will not bear scrutiny, and in the second we see that the arrangement is purely arbitrary. Any impossibility can be made plausible and proved to be a fact by this same procedure. First, we see the evolutionist postulates the purely hypothetical basis that the horse once had four toes on its front feet and three on its rear feet. Then he proceeds to arrange fossil forms that possess these characteristics according to their increasing size, and call that a demonstration. Does he arrange all the forms that are thus equipped, with four toes on the front feet and three on the hind? Indeed he does *not*: but carefully selects only those forms that will aid his theory. For instance, one very common fossil form has four toes on the front feet and three on the hind, but as he weighed some three tons he is left out. Obviously, you can not prove the evolution "from the simple to the complex, from the small to the large" by having a three ton ancestor for a one ton descendant! So very carefully the evidence is edited and obnoxious types deleted; and we note with wonder and

amazement that none of the true horses of past geological ages are included in the record. Why not? *They were too big, and were already true horses!* You cannot evolve a horse out of a horse—it is a horse already!

The horse today is a variegated genus. From the diminutive Shetland pony to the giant Clydesdale is indeed a tremendous gap; but it is bridged by intermediate forms. Above the Shetland pony is the small grey burro of the western deserts, after him the African zebra, the ass, the western bronc, the smaller saddle stock, the Arabian racer, the Percheron, and a variety of others in size and shape. They are all alive now, and are thus recognized as contemporaries. But if they were all dead, and all we had was their fossil remains, what a case we could make for evolution. We would start our "demonstration" with the skeleton of the pony or the jackass (or even the jack rabbit) and allowing a few million years for each increase in size, show how the gigantic draft stallion evolved from the tiny beginning. But we can't do that now, these specimens are all alive, and ready to give us the horse laugh if we attempt any such chicanery with their bones. The fossil forms, which were probably equally contemporaneous, cannot rise up in protest, however; they have been dead too long. We can examine the case made with their bones, we are alive. And this "demonstration" was evi-

dently not planned for those who were very much alive, mentally at least!

Before examining closely the strength and weakness of the structure of proof, let us first establish the osteological reason for the attempt to evolve a horse out of a multi-toed ancestor. We all know that the horse of the present day has only one toe on each of his four feet, and that this toe is developed into an ungulated basis for his peculiar foot, for the apparent purpose of speed and power in traction. When we examine the skeleton of the horse, however, we are struck with the presence of a bone called the "splint bone" that runs as a sort of brace on the posterior border of the large bone between the "knee" and the "hock". This so-called splint bone runs about two thirds of the way down on the front leg, and about half way on the hind leg. It is wide and thick at the top, gradually decreasing in size to a fraction of an inch at the bottom, where it suddenly terminates. On both the front and the hind legs it forms a magnificent brace, following a principle that is universally accepted in sound engineering practice. If it were not for the contention of the evolutionary school of philosophers, this splint bone, or brace, would be universally recognized as an evidence of design and intelligence in the creation of these creatures whose sole means of defense is their remarkable speed and stamina in flight. This same principle, in-



cidentally, is followed in the structure of the human as well, as the large bone of the lower leg, called the tibia, is braced by a somewhat smaller bone called the fibula. Yet our ancestors had just as many toes as we have, no more and no less.

Unable to accept intelligence or design in creation, however, the evolutionist seeks to account for this splint bone on the basis of the well advertised vestigial theory. This splint bone is thus presumed to be a remnant of a once useful functioning organ essential in the early ancestry of the present horse. The ridiculous fallacy of this contention is apparent at once when we note that the earliest fossil forms all had splint bones; that many other species beside the horse possess them, and that the first so-called ancestor of the horse, the noted Eohippus himself, also had splint bones. Here is a marvel of inconsistency: *the splint bones of the present equus are the rudimentary remains of his side toes*, which have somehow or other joined themselves together and moved to the rear of the cannon bone to form an essential brace, yet the first fossil horse, so-called, *with all its side toes still functioning has these splint bones as well!* The splint bone is the remains of the side toes; yet the creatures with the side toes present in their osteology then possessed the splint bones which are made from the disappearing toes! We confess this is too con-



fusing to make sense to us, and we pass on to other considerations.

Having referred to the evolutionary genealogy of the horse that paleontology is supposed to establish, let us now set that record forth in order to consider it in fullest detail. To remind our readers of the order in which these equine ancestors are given, we review this section of the column of historical geology from the earliest in which our present interest starts to the latest period in which we terminate our record, namely the present age of man. Fossil relics of the horse ancestry are presumed to appear first in the Eocene period, so we start with that.

*Eocene.* The Tertiary, or age of mammals, begins with the Eocene, and in this period we find Eohippus, Orohippus and Epihippus. This period is credited with being many, many hundreds of thousands of years in extent, and fossils of the horse ancestry are found in the lower, middle, and upper divisions of the Eocene period in similar profusion. The Eocene period is followed by the

*Oligocene* period, and in this geological period of time we find the horse again present, in the form of Mesohippus and Miohippus. The earth teemed with mammals of many forms in this age, and the fossil record bears witness to the fecundity of the many species that have been preserved in the rock strata of this time. There are many other species that lived then,

that resembled the horse far more closely than these that are accepted in the genealogy, but since they cannot be forced to appear as ancestors, we are constrained to accept only these two.

*The Miocene Period* follows the Oligocene in order of time, and mammals are even more abundant. In this age, although there were many forms that had a resemblance to the horse, we are forced to use only the two in our demonstration, the American Hypohippus, and the European Anchitherium. There is some confusion here: which specimen should the evolutionist use, the American or the European? Logically he should use the European specimen for an animal that comes to us from Europe, but that is embarrassing, as Anchitherium, the fossil we find in the European Miocene strata *more closely resembles the American Meshippus*, which lived in America in the preceding geological age, the Oligocene! Then also, to use the European fossil would establish a bad example and a fatal precedent, as we have to rely on the American record to prove our case. So we are forced to stick to the Hypohippus as our Miocene link, and classify him as the Middle Miocene. This again causes some confusion, for we have another Miocene specimen, namely Parahippus. But Parahippus, although far ahead of Hypohippus and much more "horse like", occurs in

the Lower Miocene and is centuries and centuries ahead of the horse of which he is the ancestor! We have also Merychippus in the Miocene, as he appears in the Middle and Upper Miocene, and lo! we now have three separate stages of the horse evolution in the same geological age; two of them appearing contemporaneously; and the third, which is the earliest, and thus the geologically youngest, is the farthest along in the evolution of the present equus. This gets more complicated and impossible as we go along. In the Upper Miocene also appears the fossil horse-creature Hipparion, although he is much more common in the period called the

*Pliocene*. With him there appear in this period also the species called Protohippus, and Plihippus. Although classified as Pliocene these three forms appear in the Upper Miocene as well, and their value as determining age factor is thus considerably lessened. Plihippus is the characteristic fossil chosen from this age, so he is placed as the typical link for this period. The Pliocene period is followed by the

*Pleistocene*, and is characterized by the presence of many varieties of the Genus Equus, the true horse family. Indeed, *horses that are horses* are so numerous in this age that they are an embarrassment to the evolutionist, and so nothing much is said about them. In case the reader is a trifle confused by these species and

ages, we will recapitulate in the reverse order from that given. We here offer a simple chart that will show the geological age, and the type of fossil horse that is found in each.

Age	Characteristic Fossil
Pleistocene.	Many True Horses, about which the evolutionist is strangely silent.
Pliocene.	Pliohippus.
	Protohippus )
	Hipparion ) These latter two found in the Miocene also.
Miocene.	Merychippus.
	Parahippus.
	Hypohippus.
	Anchitherium.
Oligocene.	Miohippus.
	Mesohippus.
Eocene.	Epihippus.
	Orohippus.
	Eohippus.
	Hyracotherium. (?)

Following the evolutionary supposition of the orderly procedure from the simple to the complex, the large out of the small, the student would naturally conclude that there is a gradual and ascending increase in the size of each succeeding form, but such is not the case. The unprejudiced paleontologist is somewhat surprised to learn by observation that some of the earlier and older forms are considerably larger

than the later descendants that presumably evolved out of them, and that even in the matter of specialized parts the later ones are sometimes frequently far behind their ancestors! As for instance, in the far away Miocene period the Hypohippus is as large as the modern Shetland pony, while the much more recent Hipparion is decidedly smaller in stature. The course of gradual development of the horse is broken again when the Miohippus becomes larger than its descendants of later ages!

The deciding factor of the position of a fossil creature in any genealogy is generally the factor of dentition. This is so generally accepted that it needs no proof in such a paper as this; we accept the classification of certain related forms on the basis of tooth similarity in practically every branch of science; in paleontology more so than in any other. It would be the natural inference, when we find the small rodent-like Eohippus given as the ancestor of the horse, to suppose that Eohippus had teeth that were similar to the equus family: but such is not the case. The bones of these so-called ancestors also bore no resemblance to the horse family, as is established by the following paragraph taken verbatim from the Guide Leaflet, No. 36, Series of June, 1927, as published by the American Museum of Natural History.

Speaking of the early four toed "horse", the leaflet states on page fifteen, "*The proportions*

*of the skull, the short neck, and arched back, and the limbs of moderate length, were very little horse-like, recalling on the contrary, some modern carnivorous animals, especially the Civets (Viverridae). The teeth were short-crowned and covered with low rounded knobs of enamel, suggesting those of monkeys and of pigs or of other omnivorous animals, but not at all like the long crowned complicated grinders of the horse."*

The teeth of the little rodent-like Eohippus are short-crowned, and enamelled, while those of the later "ancestors" are long-crowned, and fused. Again the teeth of the later ancestors are crescented where those of Eohippus are knobbed, and the later types have cemented teeth instead of the enamelled ones of the earlier forms. The skulls of the so-called four-toed horses differ from the true horse types; the feet differ, the cervical vertebrae differ, the entire back differs, all four legs differ, and the teeth bear no resemblance whatever to the horse. Why, then, in the name of common sense and in the light of science, is it called a horse? Simply because evolution demands a demonstration of its fallacious claim, *and truth must be sacrificed on the altar of prejudice.*

We feel that the case against the horse demonstration would not be complete without a mention of the paleontological fact, that all the evolutionary writers and text books seem so



eager to suppress, and that is that there are true fossil horses known to science today! Do we ever hear about them? Indeed, we do not, and for the simple reason that they spoil the "demonstration." How can you show the evolution of a four-toed, rodent-like animal, the size of a cat, into the horse, that weighs a ton, if there was a true horse eating grass side by side with the Eohippus that was just starting in to evolve into a horse thirty million years later? That simply can't be done: so they just suppress any mention of the true horse of fossil ages in North America.

There are at least two of them, the *Equus nevadensis*, and the *Equus occidentalis*. Did the reader ever hear of them? Not if his reading has been confined to evolutionary authors. We desire to stress the *Equus occidentalis* especially, as we are personally familiar with that variety. This horse (*and it was a true horse*) roamed the western slope of what is now known as the United States, especially the Pacific Southwest. It was the contemporary of the elephant, the camel and the so-called Saber-tooth Tiger, with all of whose bones the remains of this fossil horse are found in profusion. Long before man appeared on this continent the great creatures that were the companions of the horse disappeared, and the horse likewise vanished with them. But today in profusion we are recovering his fossil remains, and his bones



rise up to confront the dogma of science whose basis is prejudice, and to refute the supposed demonstration of his evolution from a creature with whom he was on grazing terms! It is apparent to the most unlearned that the case collapses: If the creature that evolved out of a tiny ancestor millions of years after that ancestor died out, really lived *with* that ancestor side by side, the supposed demonstration becomes a joke.

So much, then, for the perfect demonstration of the theory of evolution. Like most of the claims of this school, we can see in the attempt to construct a process of evolution out of the fossil record of many horse-like creatures, nothing more or less than the bigotry of prejudice attempting to prove an erroneous theory even at the expense of truth. The greatest scientist of his day, the man of impeccable integrity in fields of research, the American immortal who was the father of paleontology, even the great Agassiz, fought the theory of organic evolution to the very day of his death.

The chain of evidence that purports to support the theory of evolution is a chain indeed, but its links are formed of sand and mist. Analyze the evidence and it melts away; turn the light of true investigation upon its demonstrations and they fade like fog before the freshening breeze. The theory stands today positively disproved, and we will venture the prophecy

that in another two decades, when younger men, free from the blind prejudices of a passing generation are allowed to investigate the new evidence, examine the facts, and form their own conclusions, the theory will take its place in the limbo of disproved tidings. In that day the world of science will be forced to come back to the unshakable foundation of fact that is the basis of the true philosophy of the origin of life.

What is the true philosophy? What else can it be than the clear and scientific statement of the man Moses? He said that in the beginning God created each creature after its own kind, and ordained that they should multiply and reproduce, each always after its own kind. This we submit as the only intelligible, the only certain, and the one scientific explanation of the presence of the different species that has ever come from the pen of living man.

We take our stand with Moses, with the records of paleontology, and the amazing mass of evidence in every physical science that bears on the question of the nature and origin of life, content to ascribe the marvelous phenomena of a marvelous creation to the unlimited power of God.

THE THEORIES OF  
EVOLUTION AND THE  
FACTS OF HUMAN  
ANTIQUITY



#### IV

### THE THEORIES OF EVOLUTION AND THE FACTS OF HUMAN ANTIQUITY

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OF COURSE, we all recognize the fact that the great point at issue is not the age of man; it is the origin of man. To a large extent the argument raging today over the antiquity of the species called man is so much dust in the air. The disciple and proponent of organic evolution realizes the impossibility of ever establishing his case in *modern* research, so he flees to the dim ages that are so far past no adequate check can ever be made on his so-called findings, and there in the mists of antiquity he postulates certain data that he claims demonstrate his contention of man's evolution from an ape-like ancestor. For generations, literally, the various schools of evolution have been ardently engaged in an attempt to demonstrate their faith that man has been on the earth for literally millions of years; as they conceive the hope that thus they can disprove the account of special creation as found in the pages of the Bible. So the question of the antiquity of man, both as a true

man and as an ape-like creature with a true ape ancestry is constantly agitated, that some small comfort might be given the devotees of delusion who have no scientific basis for their hope.

The qualifying phrase "no scientific basis" is used advisedly, and is meant to be taken literally as implying all that that phrase may be construed to mean. The evidences (?) of an extended antiquity for man are purely hypothetical, entirely erroneous, and in most cases manufactured entirely out of the imagination and desire of the sponsor of such evidence. The attempts to produce data have been simply ludicrous, and in any other field would be pathetic as well. But there is no pathos in the attempt of staid men of science to falsify evidence and obscure the very subject they are presumed to illumine; this is pure chicanery. Scientific reputations are used to perpetrate shams and hoaxes that would make the late and able Barnum turn green with envy, and cause him to revise his famous estimate, which said there was only one sucker born every minute!

One such case is clearly illustrated by the famous Nebraska Man. When the late Mr. Bryan was contending for the right of a sovereign people to enforce the laws that a majority of the State desired enforced, he was confronted at Dayton, Tennessee, with the ablest cohorts of infidelity this vast nation could muster. The

issue was clear: The people desired their law so be observed, and an educational hierarchy who were wise above what is written disdainfully decided to set aside their will. Although gladly taking the tax money of the majority without which this minority would starve and their system collapse, they denied the right of their employers to control the manner in which their employers' own children should be instructed, and a famous test case was tried, to settle the issue. On the one side counsel was headed by the most famous atheist in America, on the other side by the finest Christian gentleman of his generation. At this trial atheism assembled many great "authorities" to prove, not that the law was unconstitutional, but that the theory of organic evolution was a proved and established fact. The chief of these experts was Prof. H. H. Newman, of the University of Chicago. During the course of the trial, the professor somewhat astounded Mr. Bryan by producing the "evidence" of the error of the Bible in claiming special creation. The Bible, according to him, claimed that man was created 4004 B. C., but in the State of Nebraska there dwelt a man, or a race of men, *one million years ago!* This man and his age constituted scientific argument that was incontestable, and Mr. Bryan had no reply, except to say he did not believe the existence of such a man had ever been proved. At which the experts laughed him



to scorn, for the proof was incontestable! Let us look at that proof.

It was Mr. Harold Cook who discovered this famous fossil man, and the new race was named *Hesperopithecus Haroldcookii* in honor of the discoverer. There is a tremendous literature built up around this fossil man of North America, and the most conservative estimate of the age of this creature is one million years. Of this proof (?) of man's antiquity Mr. Bryan was apparently ignorant; and for this ignorance he was openly derided. He persisted, however, in his assertion that he did not accept the alleged antiquity of this ancient citizen of Nebraska and died unreconciled to the million year old man of North America. He contended that the evidence was too scanty to base such far reaching conclusions upon, and pleaded for more time and data. He was assured that the greatest authorities of the scientific world were convinced of the authenticity of the find, and that they accepted the conclusions based thereon.

What was this find, and just what did Mr. Harold Cook discover in the State of Nebraska? One tooth. Yes, you read it aright the first time: one (1) tooth. Just a tooth! No, not *teeth*; tooth. This famous tooth was examined by the greatest scientists in the United States, and was accepted as proof positive of pre-historic man in America, and beyond the shadow

of a doubt he lived here at least one million years ago.

One of the great specialists who examined the tooth was the eminent Dr. William K. Gregory, a man of unimpeachable standing in the sphere of science that deals with the age of man and his supposed evolution from an ape-like ancestor. He is Curator of Comparative Anatomy in the American Museum of Natural History and also Curator of Fishes; he is also Professor of Vertebrate Paleontology at Columbia University. He is the author of many scientific works, and his next volume for which the world of evolution waits is entitled "Our Face From Fish to Man." He is undoubtedly the greatest living champion of the theory of a simian ancestry for man.

It was Dr. Gregory who named the *Hesperopithecus* tooth, "the million dollar tooth." He studied it, examined it, and "experted" it from every possible angle, and attested it as a tooth from a human of such vast antiquity one million years was a conservative guess.

Another great scientist who accepted all the conclusions of this tooth and its exponents is the eminent Dr. Fairfield Osborn. In his tremendous address before the American Philosophical Society at Philadelphia on April 28, 1927, Dr. Osborn placed *Hesperopithecus* at the very bottom of the tree depicting the ascent of man, and called him the oldest. He says this

Hesperopithecus find is the most ancient evidence of man in the year 1927, and places him far down below Neanderthal, or Eoanthropus, or even the famous Pithecanthropus Erectus of recent lamented memory.

It would be utterly impossible in the scope of such a paper as this to review the extensive literature and multiplied references to this evidence of man's antiquity from this one find alone; and equally useless. For now the rest of the skeleton of this famous pre-historic man of Nebraska has been found, *and it turns out to be an extinct peccary*, a species of pig that is now extinct in the territory covered by the United States, but once found here in large numbers. The solemn array of experts, the doctors, the specialists, the comparative anatomists, the eminent authorities and the curators who agreed that this was a man were all wrong; it was a tooth of a pig. What supreme confidence we may enjoy in the future, when this same imposing array of brains attest the next wonderful find! Solemnly, with every assurance that their science justified their dogmatic conclusions, they made a whole race of men from the tooth of a pig long since dead, and even found that man's age to be one million years back. And laughed at the mighty intellect of Bryan for repudiating their conclusions!

This is not the only case where this has been done, and far-reaching conclusions have been

based on such insufficient evidence. Another famous scientific balloon, filled with hot air, has been deflated now that the much advertised "Southwest Colorado Man" has been shown to have been entirely constructed from a tooth of a small horse of the Eocene period. "Give us a tooth!" seems to be the cry of the experts; and they will supply all the rest from imagination and plaster of paris.

It is a fundamental error that is often made: this basing tremendous assertions on insufficient evidence. There is before us now the case of the ancient man called the Heidelberg Man. Here again is an entire race constructed out of one lower jaw.

Undoubtedly the famous Heidelberg jaw is in many ways unusual. The size of the teeth, the height and breadth of the rami, and the receding slope of the anterior section all mark it as being uncommon in modern osteology. The grave anthropologists and the specialists in man's origin weightily considered it, and finally placed the former possessor in the scale of evolution just a little below the Neanderthal man and a trifle above the low-browed Piltdown specimen. Not that Heidelberg escaped the stigma of a low brow, quite the contrary! For the eminent Dr. Osborn says: "The Heidelberg race, now recognized as of Lower Pleistocene, is probably a giant pro-Neanderthal, *characterized by projecting eyebrows*, and by a brain that

would probably prove to be somewhat inferior in capacity to the more recent Neanderthals. We consequently reach an entirely new estimate of the brain capacity of the human race at the close of Pliocene time and at the beginning of Pleistocene time, a period estimated at between 1,250,000 to 1,000,000,000 years before our era." (Science, Vol. LXV, No. 1690, May 20, 1928, page 484.)

Note carefully the "projecting eyebrows!" For the Heidelberg man they have only as a basis of study a lower jaw. So they solemnly make a set of eyebrows out of plaster of paris, and like children at play joyfully point to the eyebrows they have themselves manufactured and with great satisfaction prove their case of antiquity and bestial origin therefrom! And going back into the past a mere million and a quarter to a billion years, they also see the size and shape of the Tertiary brain from these same eyebrows they have formed out of plaster of paris, and formed to fit their theory. This all passes the bounds of the sedate and sane and encroaches on the territory of the ridiculous and insane; and this is done in the name of science!

What is the real value of the Heidelberg jaw? Can we postulate for its possessor a condition of physiological animalism that will strengthen the theory of evolution? Indeed, far from being the case, the very opposite is true. There are

hordes of living men today with Heidelberg jaws, and they are anything but simian in their characteristics. In *Science*, Vol. LXVIII, No. 1765, October 26, 1928, there appeared an article given here in full, entitled

*The Massive Jawbones of South Sea Islanders*

“Massive jawbones, resembling in many details of structure the jaw of the ancient Heidelberg Man, have been found by Professor A. N. Burkitt, of Sydney University, in a collection of modern human remains from the South Sea Islands of New Caledonia. He reports his researches in the British scientific journal, *Nature*.

“The discovery of the Australian anthropologist suggests the possibility of a revolutionary change in our assumptions concerning the kind of person *Homo Heidelbergensis* was. It has always been taken for granted that he was a pronounced lowbrow. Though no skull of his race has been discovered, and a single jawbone is the only Heidelberg relic ever turned up, this jawbone is of such brutish proportions that the assumption has always been that the rest of his head must have been shaped to match it, and that in particular he had a low sloping forehead and a brain notably smaller than that of modern man.

“The jawbones examined by Professor Burkitt are more advanced in structure than the



Heidelberg jaw in some respects, notably in having more of a chin, but they are decidedly "Heidelbergian" in their general depth and massiveness and especially in the width and configuration of the ramus, or angle where the jaws fit into the cheek. But the natives of New Caledonia are not lowbrows; even though they are savages their skulls are "modern," and their brains are just about as large as those of contemporary Europeans.

"This leaves us with the possibility, disquieting to current anthropological assumptions, that the massive-jawed Heidelberg man did not necessarily have a gorilline cranium. And nothing short of the discovery of a Heidelberg skull can really settle the matter."

Please note that this new evidence is "disquieting" *to current anthropological assumptions*. It is then a pure assumption that the Heidelberg man had a gorilla-like cranium. But this assumption has certainly done noble service in the cause of evolution, which would be sadly handicapped without the aid of these aforesaid assumptions! There is not a single line of evidence for the animal origin of man that is not based entirely on these same assumptions. Again we feel tempted to say that the shade of Mr. Barnum must moan with envy as he contemplates the gullible generation that escaped his own lesser arts and powers to deceive.



Another of these assumptions and one that has been the very life blood of the theory of organic evolution is the justly renowned Java find, called *Pithecanthropus Erectus*. This name simply means Ape Man Who Walked Erect. Concerning him we have much to say. He has spoken for the theory of evolution with a clarion voice for many years past, as he is the chief witness in the famous "Hall of Man" in the American Museum of Natural History. There is no way of estimating the multitudes of men, women and children who have passed in review before his grimacing visage in these passing years, for it has been a popular pastime with many teachers to take their classes to the museum and display *Pithecanthropus* to them as a crushing and conclusive evidence of the antiquity of man. Not only of the antiquity, but as always, the Siamese twin of origin attaches itself to the demonstration as well.

No discovery has ever so cheered the cohorts of evolution like the *Pithecanthropus* find. They were elated above description when this proof of their story was first announced, and they have been relying on it ever since. Because of the importance placed by evolutionary protagonists on this so-called proof, we must set forth the conditions of its discovery, and also of the credibility of the find. We will deal later with the interpretation of the discovery, but must first get the history clear by recapitulation.

The discoverer was Dr. Eugen Dubois, a physician in the Dutch army who was then stationed in Java. He had been excavating on the banks of the Bengawan river in Central Java, in the hope of finding remains of pre-human man. Whether his interpretation of his subsequent finds was colored by this hope or not we cannot say, but in the light of recent events it is at least highly probable. In the year 1891 he found, near Trinal, certain fragmentary specimens, consisting of the calvarium, the endocranial cavity, a femur, three teeth and a fragment of a lower jaw. That is all he discovered, and his limited find was not made public until 1894. At that time a description only was given to the scientific world by the doctor, and he gave the hypothetical creature that presumably left these few bones the name by which it has since been known. Year after year fled by, and in the face of repeated efforts of many men of science to view these bones, they still remained unviewed by any other scientist on the face of the earth, until the year 1923. In the meantime a vast literature had grown around the *description* of the bones; countless casts and statues had been made by artists from this same description, and the Ape man of Java had grown into the Trinal *race*! Then appeared in Science, Vol. LVII, No. 1485, June 15, 1923, the following article:

*A "Skeleton in Closet"*

## Science Service

"There is a 'skeleton in the closet' of man's evolutionary history, and Prof. E. Dubois, former surgeon in the Dutch Army, holds the key. The 'closet' is said to be a good stout safe in Haarlem, Holland, and the skeleton is none other than that of *Pithecanthropus Erectus*, the famous ape-man who lived in Java over a half million years ago. For thirty years scientists from all over Europe have besieged Dr. Dubois for permission to examine the remains, while eminent anthropologists have crossed the ocean for that purpose only to be turned away at the door.

"His locking up of these specimens and holding out on his fellow scientists has become an international scandal, and is credited with causing other scientists to follow the same policy. The Natural History Museum at Paris now has a number of skulls of cave men of the Neanderthal period which were discovered in 1912 which they refuse to allow scientists to examine thoroughly.

"The Java ape-man remains were found by Dr. Dubois near Trinal in the central part of the island of Java in 1891. All that has been furnished the scientific world are casts of the top of the skull, and two teeth, and a

photograph of the thigh bone in 1894. He concluded that these remains represented a true intermediate form between anthropoid apes and man. Some, however, believe they represent a very primitive man, others that they represent merely an extinct form of ape. To solve more definitely these problems, scientists have sought permission to examine the original petrified fossils themselves, but Dr. Dubois has refused on the excuse that he wished to publish his own findings first.

“Scientists recognize that such action is proper if the findings are published within a reasonable time; but to explain the years that he has withheld his work it has been rumored that he was influenced by religious bigotry to which these bones were ‘a skeleton in the closet’ in the general acceptance of that phrase.

“The story of an unsuccessful pilgrimage to Dr. Dubois’ home in Holland several years ago is told by Dr. Ales Hrdlicka, anthropologist of the Smithsonian Institute. He was simply unable to find Dr. Dubois’ home. Dr. Hrdlicka praises Dr. Dubois’ exploration and early reports on the valuable bones, although he and many other scientists would like to see the originals, make their own measurements and form their own conclusions. ‘The final word concerning their exact age and

true biological position has not yet been pronounced,' said Dr. Hrdlicka, in explaining that there was no room for doubt as to the place of discovery of the several bones and their geological relations.

"The Java ape-man is the oldest of all the links tending to show man's rise in the world. From the geological strata in which it was found, it is estimated that it must have lived from 500,000 to a million years ago, making it nearly twice as old as the next oldest cave-man. The first human or near-human remains yet found, it was recently shown by Dr. Hrdlicka, are those of the so-called Piltdown man found near London, England, and probably dating back over 250,000 to 300,000 years. He believed that modern man may have developed from this western type and that the Java ape-man represents an extinct branch and is not the direct line of man's ascent."

Evidently, as a result of this criticism, Dr. Ales Hrdlicka was the first scientist to be invited to view these specimens, and early in July, 1923, *thirty-two years after their discovery*, these fragmentary objects were subjected to their first unprejudiced scientific analysis. As a result of his survey, Dr. Hrdlicka said: "None of the published illustrations or casts now in

various museums are accurate. The jaw fragment was from another and later type of man. The femur is without doubt human."

Note that statement carefully, as it is made by the greatest living anthropologist. "None of the published illustrations or casts now in various museums are accurate!" But for thirty-two years these inaccurate and misleading fakes have been the chief anthropological evidence of the theory of organic evolution, and even today, as I write, years after this honest and honorable scientist made his survey of these bones, the false and misleading statues still occupy their old and established place of prominence in the museums of the land. And that, in the face of the fact that Dr. Dubois had on July tenth sent to the Smithsonian Institution what he himself called "new and reliable casts" of all the fossil bones of the famous *Pithecanthropus*.

The value and worth of these reconstructions now being displayed, that have done such great service for these score and a half years, may be estimated in the light of what true experts, who know these specimens intimately, have to say about these said reproductions. For this purpose I give here a copy of a letter written to me by Jean M. F. Dubois, the son of Dr. Eugen Dubois, the original discoverer of the Trinal man.



"Mr. Harry Rimmer, care Science Bureau,  
Los Angeles, Calif.

Dear Sir:

"I have been advised that you made a statement recently in regard to the *Pithecanthropus Erectus*, discovered by Dr. Eugen Dubois, considering same a fake. The skull, as well as the other bones were faked, you must have stated.

"If you referred to the 'fossils' on exhibit in New York I may say that you are perfectly right in calling them faked. They really are, being only copies (gypsum) of the original fossils, which are in Holland in the possession of their discoverer, Dr. Dubois.

"For your guidance kindly be informed that the original fossils have all the earmarks of fossils of a pliocene age, and even Virchow, who all his life fought bitterly against the doctrine of Evolution, had to admit that these bones had puzzled him.

"I am writing the above in order to do justice to Dr. Eugen Dubois, my father, who discovered the fossils of *Pithecanthropus Erectus*, (in Java), *making the theory of evolution a historical fact.*

"It may surprise you to know that my father and the writer, (both strongly believing in evolution), believe in God. It may not be a "personal God," but our God is a God in the large, as He should be seen!



“I trust that the above information may be of interest to you, and may help you further in your campaign against evolution, as nothing can do more harm to any case than incorrect statements.

(Signed) J. M. F. Dubois”

Before commenting on this communication, let me hasten to disclaim any intent to belittle Dr. Dubois, or cast reflection on his integrity. I believe, and have always believed, he did find exactly what he says he found, and in exactly that condition and locality. My contention is not against his facts, but the interpretation special pleaders for organic evolution have placed upon these facts. As for instance the statement of Mr. Dubois in the above letter, as underlined and emphasized by the writer himself, that this one fragmentary discovery makes the theory of organic evolution a historical fact. That is a tremendous decision to base on a mere handful of bones, especially in the light of further studies of those bones. Also, the age factor is in the arena again, and after having once established and settled the fact of the utmost antiquity for the *Pithecanthropus* specimen, as we see from the following note from Dr. Osborn. This reference was published in *Science*, Vol. LXIX, No. 1782, February 22, 1929, and is entitled,

*Note on the Geologic Age of Pithecanthropus  
and Eoanthropus*

“It is a singular coincidence that the original estimates of the geologic age of both the Trinal ape-man of Java (*Pithecanthropus*) and the Piltdown dawn-man of Sussex (*Eoanthropus*) are being revised at the present time.

“*Pithecanthropus* when discovered was regarded as of Upper Pliocene age—a proper geologic position for the supposedly ancient ancestral link in the human chain. It now seems almost certain that *Pithecanthropus* is of Middle Pleistocene age, since, as Dietrich and Osborn have pointed out, Proboscidean and other quadrupeds among which *Pithecanthropus* lived are apparently Middle Pleistocene, still less Pliocene. Professor Osborn has written Professor Dietrich, of Berlin, to go over this paleontologic evidence again because unless it can be challenged it proves that *Pithecanthropus* is another instance of the survival of a very primitive type of mammal in a primitive forested environment where food was plenty, there was little need of clothing, and safety was assured by concealment or flight rather than by combat with weapons.

“On the other hand, the case of *Eoanthropus* (Piltdown man) is quite different; its

darkly colored and thoroughly fossilized skull fragments are intermingled with fragments of grinding teeth of Proboscideans of unquestionable Upper Pliocene age, namely, the species *Archidiskodon planifrons* and *Anancus arvernensis*. If *Eoanthropus* belongs with these teeth it is surely Upper Pliocene, but intermingled in the Piltdown gravels are other tooth fragments of somewhat lighter color belonging to the hippopotamus which in Great Britain was a Lower Pleistocene inhabitant. By this mixed evidence it is demonstrated that the *Eoanthropus* skull was probably a washout river channel specimen from some old sand or gravel bank and the problem is whether it came from a Pliocene gravel bank with the primitive elephant and mastodon, or from a Pleistocene gravel bank with a primitive hippopotamus.

“In either case *Eoanthropus*, the dawn-man of Sussex, now appears to be of greater geological age than *Pithecanthropus*, the Trinal ape-man. Thus in the course of the last eighteen years *Eoanthropus* and *Pithecanthropus* have changed places in the geologic time scale.

Henry Fairfield Osborn,  
American Museum of Natural History”

Now we are constrained to wonder what changes may be made in the interpretations of these finds in the *next* eighteen years. These

findings are all subject to repeated revision and it is folly to claim historical accuracy for the theory of organic evolution on such a flimsy structure of scanty evidence.

Especially is this so when we note the conditions under which these few relics were recovered. Upon making a study of the reproduction of the sketch of the site of this find, made by Dr. Dubois, and printed in *Science News Letter* for the week of Oct. 9, 1926, we note that the fragments were discovered below the dry season level of the river, and far beneath the high water level of the rainy season. To anyone who has ever witnessed the action of flood and streams in piling dis-associated debris in an indiscriminate heap, the apparent association of fragments found on a river bank below water level loses any scientific significance it may otherwise have had. There is even serious doubt that any of these fragments belong together at all, or that *Pithecanthropus* is anything but a highly improbable synthetic reproduction! That science is thinking seriously at last on this phase of the contention is clearly seen from the accompanying article from *Science*, Vol. LXVIII, No. 1762, October 5, 1928, in which Dr. Gieseler expresses what many others have been thinking and saying for some time. Writing under the caption "Primitive Skulls and Thigh-Bones," the article carries food for thought.

*Primitive Skulls and Thigh-Bones*

“Has man gone up the evolutionary ladder literally feet first? Did his legs evolve into human legs faster than his head evolved into a human head? The possibility that there has been a tendency in the human genus to evolve from the bottom up in more than the figurative sense is suggested by Dr. Wilhelm Gieseler, of the University of Munich, writing in the German scientific weekly, *Forschungen und Fortschritte*.

“Dr. Gieseler has made a study of the two most disputed human or near-human remains so far discovered, the Pithecanthropus or Ape-Man of Java, and the Broken Hill Man of South Africa. Both of these nth degree great uncles of the human race had very primitive skulls, the cranium of Pithecanthropus especially being ‘so low-brow’ that many anatomists are still disposed to deny it human rank at all, but to classify it instead as the skull of an extinct species of gibbon or East Indian ape.

“Dr. Gieseler defends his opinion that Pithecanthropus was human largely on the basis that his eye-sockets are man-like rather than ape-like, although he admits that the skull is so low that the doubts of some of his colleagues are easily accounted for.

“But an examination of the thigh-bones of both Pithecanthropus and Broken Hill Man

tells an entirely different story. Not only is the thigh-bone of *Pithecanthropus* quite unlike that of a gibbon, but the thigh-bones of both the extinct humans (or near-humans) are so much like those of modern man that doubts have been expressed in both instances as to whether they really belong with the skulls at all. If they do not, it is an extremely striking coincidence that *two* debatable skulls should have happened to be found with thigh-bones that did not belong to them. If they do, we have the astonishing spectacle of men, or man-like creatures, with very decidedly primitive skulls walking on leg-bones built on a decidedly modern pattern."

Note especially the statement that many anatomists are disposed to deny it any human rank at all; and that Dr. Gieseler ranks it as human "largely on the basis that its eye-sockets are human rather than ape-like," at the same time admitting that the doubts of his colleagues are well founded. *Consider also the origin of these same eye-sockets* that are the basis of his faith in the human derivation of *Pithecanthropus*: they were made by the reconstructors out of plaster of paris! The artists themselves *made these eye-sockets*; and then like children playing with mud pies and clay images base the proof of the theory on that portion of the figure that they themselves had made. And made not according to the clearly established laws of



osteometry, but according to the desire of their prejudice, and in order that they might have even this bruised reed of their invention to fall back upon. And this in the sacred name of Science!

The final word about Pithecanthropus, and the evidence of the eager desire of the evolutionists to accept anything that might be of aid to their sinking theory, must be discussed in the light of the new skull of the famous Java specimen "found" in Trinal, in Java, by another Netherlands scientist, Prof. Heberlein. The sensation this find made is still fresh in the minds of the public, and the rare delight of the defenders of evolution will not soon be forgotten. Here is a typical newspaper article, taken verbatim from the press, headlines and all:

*Perfect Skull of Prehistoric Man, Missing  
Link Found*

"Batavia, Java, Sept. 28. (AP)—Professor Heberlein, of the Netherlands Government medical service has discovered at Trinal, in central Java, a complete skull of the ape-like creature termed by some "the missing link" and by science Pithecanthropus Erectus.

"Professor Heberlein's find, which is complete and sound, will be kept in Dutch East India, as the exportation of such relics is prohibited."



A most extensive article was published also in Science News Letter for October 9, 1926, carrying the spectacular headline: "Jungle Speaks Again on Man's Pre-Human Relatives."

Then followed an extensive article by Frank Thone, telling how a bewildered creature, a man, "but marked deeply with the brand of the ape" has emerged at last from the silence of two hundred and fifty thousand years, and Pithecanthropus at last has a brother. This is followed by an extensive article telling of the value of the new find to science, carrying the same note of elation all the way through.

The elation is more than justified if this is a true and complete skull of Pithecanthropus, but alas! the bubble burst. At the regular meeting of the American Association for the Advancement of Science at Philadelphia, December 31, 1926, Dr. Ales Hrdlicka gave a graphic account of this and other scientific frauds, and he said it was *not a skull of the famed ape-man; but the knee bone of an extinct elephant!*

So here we are right back where we started from, with the whole contention of the tremendous age of man and the supposed demonstration of his ape-ancestry resting entirely upon a pitifully small handful of fragmentary bone remnants. The evolutionists would indeed be pressed for material if plaster of paris were not so abundant. But the evidence of man's antiquity in the field of human fossils is so

scanty as to be practically valueless when considered as time factors.

There remains then, just one other field of evidence, that being the discovery of various artifacts of human origin in certain geological strata which are interpreted to prove a vast antiquity. The conclusions drawn from this type of evidence are as erroneous and unreliable as those previously surveyed in the field of osteology, yet as it is the last line of defense for the animal ancestry of man, it is being stressed heavily today. The stone implements of extinct races are of fascinating interest to all of us, especially when they are associated with the burial deposits of their originators. There is a waning custom that once held full sway, of arranging the various types of stone implements, weapons and tools, in an ascending scale of culture and dating them by their rough or smooth finish. The age factor is presumed to be settled by the amount of skill and finish the object manifests, and the rougher the stone the more ancient it is supposed to be. The fallacy of this method is known to every trained archeologist, for in all of our collections we can show various implements less than a century old that are as crude as anything the paleolithic devotees can demand, and others that are many, many centuries old that are most beautifully wrought, showing a tremendous degree of skill and mechanical attainment.

To arrange stone implements in age order by culture is utterly unscientific. Let us suppose that our race catastrophically perished, and three thousand years from now a new race of archeologists began to dig us up, knowing little or nothing of the civilization we represent. They would perhaps call us the "Men of the Old Steel Age," and in their museums would arrange our evolution by various tools. If they followed the present custom they would display a case of crowbars, labelled "Rough Steel Age," and date these tools as very early in our culture. In another case they would put a set of surgeon's instruments or a watchmaker's tools, and call these the "Smooth Steel Age." An explanation would be printed in the guide book, saying that the crowbars were six thousand years older than the finer tools! That is, if they followed the unscientific methods of the modern museum today.

What a fine case they would make with a display that ran from a crowbar at one extreme, to the dentist's drill at the other! And how utterly misleading to show such a gradual evolution, when we all know that we use a rough, coarse tool for a homely task, and a fine polished instrument for a delicate bit of work. So with the men of an ancient day. When the Indian desired to quarry flint, he used a rude stone hammer that was fitted for a rough task. At the same time he carried on his person a

finely finished stone blade to use in skinning his game, or shaping the shaft of an arrow. While his women sewed skins together, using sinews for thread and a beautifully wrought stone drill or awl with which to punch the holes. Let us simply have the integrity as research scientists to accept the facts we possess without seeking to advance our prejudiced opinions and pet theories with interpretations of those facts that are totally unwarranted.

When we get into the evidence of geology again, the case is even less reliable. Artifacts and human evidences that belong on the surface may be found in many varying depths from many causes. One peculiar case of intrusion came to my attention a few years ago while excavating the Badger mounds near the border of extinct Lake Tulare. Fourteen feet deep in the soil, mingled with bones almost innumerable, I found a small piece of amber glass of very recent origin, evidently from a broken beer bottle. It was startling to find this down among bones of such antiquity, but instead of accepting this as evidence of the late burial of these primitives, or as evidence of the primitive man's ability to make such glass, we looked for the reason. We might have measured the depth at which the fragment was found, allowed one quarter inch for every hundred years (as is often done!) and proved the antiquity of glass making on the American continent. But instead of that

we found the tunnel of the rodent that had penetrated to the bottom of the burial pit, and saw how the fragment of glass had penetrated by intrusion from the surface.

A most illuminating article on this subject appeared in *Science*, Vol. LXII, No. 1603, September 18, 1925, from the pen of Dr. W. H. Holmes, an archeologist with the Smithsonian Institute. Dr. Holmes begins his article by stating that the fascination of scientific research has brought many enthusiastic but untrained adventurers into the field, whose fanciful interpretations or fragmentary finds are of only slight importance as they are soon forgotten. However, when geological chronology is appealed to by explorers whose statements and conclusions find a place in the records of scientific journals the case becomes more serious and deserves more than a passing notice. He then refers to F. B. Loomis, and his reputed find of certain artifacts of human origin associated with the bones of the Columbian elephant at Melbourne, Florida. Loomis made the contention that this proves that man and the elephant were contemporary in North America, establishing a Pleistocene antiquity for man. Analyzing this evidence, Dr. Holmes says: "It has been my practice during many years of archeological research to begin on the surface of the site under examination with the known peoples and their culture, following the story downward

in the successive formations until all stages of occupations disappear. And I may state that in no case in many years continuous investigation in the American field have I found a trace of human handiwork not assignable with safety to the Indian tribes, historic or pre-historic, and none so deeply imbedded in geologically ancient strata as to include the possibility of intrusion from recent horizons."

Dr. Holmes then applies this same method of consideration to the find of Loomis, which consists of one rough flint instrument, one fractured flint blade, leaf shaped; a knife or spear-head; and three pieces of fossil bone marked with human handiwork.

The stone fragments were found in a bed of sand three feet below the surface of the hammock, and associated somewhat closely with fossil bones of an extinct elephant. The bone fragments, incised, were found in surface muck thrown up by a dredge, so no argument can be predicated upon their position.

In approaching this study, Dr. Holmes establishes the fact that the primitive Indians of Florida quarried fossil bones to use in their tool-making art, and says: "There is a good reason to hold that the flint blade found was broken by a Florida Indian in an attempt to utilize bits of fossil bone in implement making, and that at a period of ten thousand or more years after the last elephant had disappeared



from the Florida jungle." Indians, hastily called away from their quarrying operations have many times left their implements behind them, and these were subsequently covered up by such natural causes as cave-in, action of water, and so forth, so the evidence of antiquity collapses here under the light of a sane and impartial investigation.

As with the Loomis travesty, so with the Hesperopithecus, the eolithic, the Frederick, and all the other recent startling "proofs" of man's antiquity from the cultural factors and their geological associations. As the Hesperopithecus case is the late and presently agitated one, I will conclude with this final article that settles the nature of that demonstration. This article, appearing in *Science*, Vol. LXVII, No. 1734, March 23, 1928, is by one of the real authorities in America, Dr. N. C. Nelson, of the American Museum of Natural History, and is entitled:

*Pseudo Artifacts from the Pliocene of  
Nebraska*

"In *Science* of May 20, 1927, there appears, on page 482, a genealogical diagram by Henry Fairfield Osborn, showing his recently modified conception of the origin of man and of his culture. Near the base of the family tree is indicated the geological position of the well-known Hesperopithecus tooth, and of certain accompanying fossil bone fragments,



thought to be implements. Indirect textual references to the latter are to be found in the same issue (*Science News*, page xiv) and also in *Science* of May 6 (*Science News*, page x).

"In *Science* of December 16, Professor W. K. Gregory published a belated article setting forth his matured views regarding the famous tooth under the explanatory title, "*Hesperopithecus* apparently not an Ape nor a Man." It seems timely, therefore, that available observation on the associated bone 'implements' should also be made known without further delay and I accordingly submit my findings as originally set down in August.

"The occurrence of anthropoid remains in the Snake Creek beds at Aldine, Nebraska, being still under dispute, the existence in this Pliocene deposit of bone objects suggestive of a tool-making being becomes a subject calling for more than ordinary caution. Observation, unfortunately, is further limited by the fact that in the absence not only of human skeletal remains and of hearth-sites, but also of stone implements such as could have been used in the production of bone artifacts, the question of man's presence comes to depend entirely on the evidence furnished by the peculiar bone specimens themselves.

"Having been requested for an opinion concerning these bones, it was at once as-

sumed that the occasion demanded something decisive. The entire available collection—or rather selection—has therefore been subjected to systematic study. To check my own observations, the material was looked over independently by a laboratory assistant who had previously shown some aptness, e.g., in detecting frauds among our old Indian collections. More precisely stated, this examination involved the scrutiny of nearly 3,000 specimens with a magnifying glass and by the aid of the best obtainable light. In short, all reasonable mechanical precautions have been observed. By way of further precaution I have also, as a matter of course, asked myself these questions: What now is it you are looking for? What precisely are the standards by which you are to measure these specimens? Expressed in other terms, what are the diagnostic characters indicating bone artifacts?

“Without giving a complete inventory of primitive bone implements and ornaments, it may here suffice to say that implements divide into two major groups or classes, viz., sharp-pointed and sharp-edged. The ornaments, or at any rate the objects less distinctly utilitarian, separate into tubular forms (cylindrical beads, flutes, etc.), and thin flat forms of varying outlines, rectilineal and curvilinear. And what distinctive features normally

characterize each and all of these four outstanding classes of objects? First of all, a certain more or less easily recognizable shape or design. In the second place, implements are generally marked by evidences of wear, often resulting in a high degree of polish. Generally, too, they are marked by abrasions, if not actual perforations and they almost invariably show certain unmistakable straight-line cuts and scratches running diagonally or transversely across the natural striations of the bone itself. Assuming, therefore, that the bone specimens to be examined were worked or utilized in a fresh state, and that at least some of the more deep-going evidences of artificial treatment have been preserved in the fossilized objects now available, we have remaining these criteria: shape, wear, polish, butting marks, chopping marks, abrasions, and perforations. These are perhaps not infallible proofs but they are all that we have. In matters of observation pertaining to objective facts no man is entitled to call up a standard for judgment out of his own inner consciousness.

“By the light, then, of these deliberate precautions, the cursory examination of all the material and the repeated critical study of the several suspect pieces were undertaken. The result is, in brief, that I had no positive

evidence either of intentional design or of artificial workmanship.

“It is true there are several pointed forms resembling awls and also some tubular bone sections resembling beads, which, if found, say, in an Indian shell-heap would cause a careful archeologist to look at them several times before discarding them. But, after all, aside from their suggestive shape—simulating not finished articles but rather improvised forms often adapted from accidental fragments—they carry none of the real tell-tale marks above enumerated. When therefore, it is alleged (*Science News*, May 10, p. xiv) that “eighteen of the (Nebraska) types of tools have been matched with counterparts found in the ruins of cliff-dwellers” two observations become imperative. One is, that with two exceptions—awls and tubular beads—the “eighteen counterparts” are not designed tools or ornaments, but merely accidental fragments, a few of which have served temporary purposes. The other is that the “matching process” referred to involved on the discoverer’s part the culling over of many thousands of fossil bone fragments. We have here, in other words, a close parallel to the selective procedure of which Europeans have made so much in the accumulation of eoliths. But, as in the case of eoliths, it is pertinent here to remark that given the proper raw ma-

terials and the right natural conditions for their manipulations, nature produces many things more or less suggestive of human handiwork, and the collector by taking pains can easily gather an array of imitations which considered by themselves are sometimes deceptively impressive.

"It is true also that the Nebraska collection affords several bone specimens marked by worn U-shaped grooves of varying and rather large dimensions and of unexplainable origin. These grooves are, however, weathered irregularly, and taken by themselves are meaningless, being in no sense characteristic of true artifacts.

"Lastly, there are two, perhaps, three, bone fragments which carry decidedly suggestive markings. Two of these specimens are so striking that once more the writer would say if they had been found in a refuse heap one might conceivably have retained them as showing certain accidental and purposeful indications of human activity. One of these pieces is a rib fragment with some shallow irregular cutlike markings on the inner face. No one can say that these are or are not artificial. They may, however, be nothing but tooth marks. The other piece is a tibia fragment, the sharp natural angle of which carries four slantingly transverse chop-like marks. These markings, though

fairly deep, are not sufficiently cut to enable any one to say positively that they are artificial; and close to them, moreover, are several other fainter and more irregular markings which are certainly not artificial and which therefore weaken the original possibilities.

“There remains the difficult question of accidental fracture. The success of the collector’s matching process is really dependent on this feature. And it can not be denied that some of the longitudinal and diagonal breaks exhibited by the Nebraska specimens resemble the breaks to be observed in the animal bones so abundant in our shell-heaps and ruins everywhere and which can with reasonable certainty be attributed to human agency. Some of these fractures in the Nebraska finds are probably old and may have been produced while the bone was green or fresh. But who is prepared to tell us of the finer distinctions — if any — between fresh bone crushed by a carnivore and fresh bone crushed by a man between two stones? Certain other longitudinal fractures characteristic of the Nebraska bones, especially those carrying the split clear through the condyles, are distinctly unhumanlike performances; besides, they seem to me to have been made since the bones were fossilized. Belonging to this latter class are also many clear-cut transverse fractures,



which certainly could not have been produced in fresh bone. Finally, the various facets on the fractured pieces often show different degrees of wear and polish, suggesting again that the breaking-up process has been prolonged and at least in part subsequent to fossilization. The more or less uniformly worn or semi-polished condition of certain of the specimens is a matter which may be left for others to explain, but it can scarcely be regarded as the work of man.

"The inevitable conclusion is, therefore, in my judgment, that the presence of artifacts in the Snake Creek deposits is not established and can not be established by the collections examined to date."

N. C. NELSON,  
The American Museum of Natural History

The antiquity of man is still an open question. We do not believe the presence of man on this planet has ever been established at a more remote age than ten thousand years at the very outside, as far as our present knowledge goes. And with the present information at our disposal concerning the chronology of the Bible\*, there is not even a remote semblance of contradiction between the science of anthropology and the sacred Scripture. The two accounts of human antiquity agree so far as is proved.

\*See: The Chronology of the Bible by this Author



This is not the real issue, however, as we stated in the beginning of this paper. The controversy is not over the age, but the origin of man. Concerning that matter, we still hold with the prophet Moses, who, speaking by the inspiration and from the revelation of God stated the process of origin clearly when he said:


“So God created man in His own image, in the image of God created He them; male and female created He them.”

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